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A COURSE OF STUDY FOR THE PREPARATION OF RURAL SCHOOL TEACHERS

NATURE STUDY, ELEMENTARY AGRICULTURE,
SANITARY SCIENCE, AND
APPLIED CHEMISTRY

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STATE NORMAL SCHOOL

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LETTER OF TRANSMITTAL.

DEPARTMENT OF THE INTERIOR,
BUREAU OF EDUCATION,
Washington, D. C., January 6, 1912.

SIR: A very important problem of popular education to-day is the better adaptation of the work of the rural schools to the needs of rural life. The schools must make the people more intelligent in regard to the life they are to live. Both for culture and practical utility the course of study in these schools should conform more closely to the environment of the child and the future work of the man. This can be brought about only by teachers educated and trained for the task. "*A course of study for the preparation of rural school teachers in nature study, elementary agriculture, sanitary science, and applied chemistry,*" which has been prepared by Dr. Fred Mutchler and Mr. W. J. Craig, of the Department of Science in the Western Kentucky State Normal School, is a valuable contribution toward the solution of this problem and can not fail to be very helpful to officers and teachers in normal schools and other schools in which teachers are trained. I therefore recommend its publication as a bulletin of the Bureau of Education.

Very respectfully,

P. P. CLAXTON,
Commissioner.

The SECRETARY OF THE INTERIOR.

A COURSE OF STUDY FOR THE PREPARATION OF RURAL SCHOOL TEACHERS.

NEED OF SPECIAL TRAINING FOR TEACHERS OF RURAL SCHOOLS.

The part of our educational system that has received least attention in the immediate past is the rural school. Much good work has been and is now being done in the reorganization of courses of study, in training teachers, in planning for material equipment, and all the various details that help make an efficient school system. While these efforts have been well directed and are in large measure being carried out, they have nevertheless been inadequate for reviving the rural school. There is still lethargy among its patrons, still in far too many instances a deplorable retirement of pupils at an early age from the country school, still a very low attendance, still a lack of school spirit in the rural community, and still a vast amount of teaching which, though ever so well done, misses the high mark of its influence. The rural school has not the influence that it should have. One of the chief reasons lies in the fact that the course of study is ill-adapted to rural life in all of its relations: We are united in believing that a school should train its pupils for life and its work while these pupils are living and working. The course of study taught in the rural school to-day is entirely too much like the course that is taught in the city school; in fact it has been modeled to fit the needs of the latter without consulting enough the ends that are to be attained in the former.

Rural interests and rural problems are not like the city's interests and its problems; and educators everywhere, especially in the South, are coming more and more to believe that the course of study adapted to securing the most efficient rural life is radically different from any other course of study. The elementary school must, if it fulfills its high purpose, minister to the needs of the community in which it resides. To do this a course of study coordinated with rural life is needed, together with a corps of teachers trained to put in operation the work that the country districts need.

It is not within our purpose to make a study of rural interests and conditions or to outline a course of study for the rural schools, but to suggest some of the lines along which the teacher should be trained who essays to teach in the country district. It is not necessary to

argue whether this training should be different from that of any other school. That fact is now generally admitted, because the problems to be solved and the interests to be encouraged, developed, and ministered unto are different from those in any other phase of elementary education. The country school will not reach the position of efficiency that belongs to it until a distinctive training is required of its teacher.

This distinctive training should give the teacher the power to answer the call of the rural community and the interests of country life will determine what should be emphasized in the country school and consequently what should be emphasized most in the rural teacher's special preparation. The country district is first of all and above all a place where the practical in education is needed, and one of the chief aims of the rural school should be the development of thrift. Thrift has always been and always will be a fundamental factor in progress, whether of the individual or of the community at large. Better homes and better household economy in every respect; better live stock and better barns; better crops and better use of them; the maintenance of the productivity of the soil and the reclamation of worn-out fields; better roads and better vehicles of travel; more good books, papers, magazines, art, and music for the boys and girls; better social conditions—these are the urgent needs of country life to-day, and they are most worthy because they all contribute so much to a happy and a useful life. Shall not the rural schools minister to these needs? And shall not the rural school teacher's training be such as to prepare him for teaching in a school whose major work is concerned with the solution of these problems? Can we do better at this time than to train the pupils of the country districts to make the most of the conditions that surround them by showing in a very definite and practical way the opportunities for a noble life that lie within their reach? Real progress can not be made without thrift. The rural teacher's preparation should not be wanting in the elements that equip him for serving this need.

POINT OF VIEW OF A STATE NORMAL SCHOOL.¹

For the purpose of making more generally understood the proper attitude of such an institution toward the problem of elementary rural education, the following discussion and statement of work is presented. The aim of this course, it will be readily understood, is to increase the efficiency of the rural teacher.

A State normal school should prepare a large number of teachers to go out into the rural communities, there to be potent factors in bringing about the best possible rural life. The rural child is

¹ The course and methods described herein are largely those of the Western Kentucky State Normal School, Bowling Green, Ky.

entitled to a course of study and to a course of instruction that will dignify and enrich his life and make life for him in the rural environment, should he choose to remain there, not simply tolerable, but glorious. Unfortunately, teachers everywhere, with rare exceptions, have idealized city life and unwittingly have been potent factors in inducing young men and women to leave the farm and move into the city. This movement often carries some of the best blood and brain of the community into the city, often to be lost, wasted, or destroyed; certainly to be lost from the rural community. It is possible and right, indeed a duty, to dignify rural life and to save to it and its interests the best blood of the country.

Since there are common interests between rural and city peoples, the courses of study in their schools and the instruction should have certain elements in common, but there are important differences in industries and in environment. Corresponding to these differences, there should be a difference in instruction, and in this difference the adjustment should be so devised as to make the school contribute most to the needs of rural life.

To prepare teachers who can meet this demand, the following course of study and training is proposed: The first year is largely given to distinctively rural problems and interests, the two succeeding years turn more toward general scholarship, in order that those taking the entire course may be able not only to teach rural schools, but to enter larger fields of usefulness.

PREPARATORY COURSE.

The subjects of this course are arranged especially for students coming from the rural schools and from the grades, and for those who have not taught. Likewise, many who have taught will find it necessary to take some of the subjects in this course before they can carry the work of the elementary course successfully. While it is desirable to have all of the preparatory course completed before beginning the elementary course, one can complete several subjects in the elementary while finishing the work in the preparatory course. The subjects suggested for the preparatory course are as follows:

Arithmetic.	Penmanship.	Civil government.
Reading and spelling.	Physiology.	Elementary history.
Grammar.	Nature study.	State history.
Geography.	Theory and practice.	General observation.

ELEMENTARY COURSE.

Students who have completed all of the work of the preparatory course and of the elementary course, and are not deficient in qualifications relating to personality, habits, and character, may be granted certificates entitling them to teach in any rural or town school.

The certificate should not be granted for less than 26 weeks of resident work. The subjects for this course should be as follows:

Physiology and sanitary science.	English (farm themes). Pedagogy.	History. Observation.
Grammar.	Chemistry of farm and kitchen.	Physical geography. Drawing.
Arithmetic.	Manual arts or domestic economy.	Agriculture. Rural life problems.
Psychology.	English.	
Music.		
Forensics.		

COURSE FOR RURAL TEACHERS.

It is now quite generally conceded that the following subjects are necessary for the proper training of rural school teachers: Nature study, elementary principles of practical agriculture, sanitary science and hygiene, domestic economy, and practical principles and problems in elementary chemistry and physics as applied in the study of these subjects. The teacher should be required to have a working knowledge of these subjects. The formal training of most country boys and girls ends with the rural school course. A fundamental knowledge of the foregoing subjects is certainly a minimum to require of the teacher who trains them for the lives that they must lead.

In the outlines which follow the topics are given with considerable detail in order to indicate what in our opinion should be incorporated in the elementary rural-school course in so far as pertains to these subjects. It is believed that teachers trained in this work will be much better prepared to do such work in rural schools, and that those schools will show a measure of efficiency that has never yet been generally attained.

NATURE STUDY.

As a starting point for the practical work in the rural school, nature study offers a very rich field, probably the best within our reach at this time. The science of living things is boundless, and life is all too short to comprehend any great part of it. No one can, however, go very far in his experience without realizing that as a living being he must cope with many other living forms, some of which are his enemies and others his friends; that some are his constant helpers, and others equally strong are constantly opposed to him; that some are making his life a pleasure and that others are tending to make it drudgery; that living things are "forces in nature" either for good or for evil, and that in order to make the most of life it is necessary to know what these living things are doing in order that a proper attitude toward each may be taken. It is the aim of nature study to reveal those living things that influence human life

most. "Nature study is learning those things in nature that are best worth knowing to the end of doing those things that make life most worth the living." (Hodge.)

It is not the idea that we shall teach all things in nature, nor that all things are of importance if taught, nor that anything that is well taught is as valuable as any other thing. As a matter of fact, many things are taught that are not worth the effort or the time required to learn them. Only weariness and discouragement come from teaching such facts, and only indifference results on the part of the learner. But there are some things that every rural school teacher should see that his pupils learn, because of their importance in shaping the conditions of rural life. The following outline of a course of study is suggested for the preparation of the teacher to teach these important things. This course is intended to lay the foundation for the work in agriculture, both in the teacher's preparation and in the work of the country schools. In the latter the proper place for nature study is in the early grades, probably through the fifth or sixth, when practical agriculture should begin.

OUTLINE OF A COURSE IN NATURE STUDY.

PURPOSE AND POINT OF VIEW.

- I. To give first-hand knowledge of nature.
- II. To learn the useful and harmful in nature.
- III. To establish permanent helpful life relations.
- IV. To form a basis for work in agriculture.

SUBJECT MATTER.

I.—Bird life (the problem of establishing life relations).

1. List of helpful birds in the community. Why helpful?
2. List of harmful birds in the community. Why harmful?
3. List of nonmigratory birds.
4. List of game birds.
5. Study of State game laws.
6. General habits of birds: (a) Nest and nesting materials; (b) incubation period (observation); (c) migration; (d) notes.
7. Food and feeding tests: (a) Proportion of animal and vegetable food; (b) proportion of insect pests and noxious weed seeds in food; (c) groups of students (not over four in number) are asked to watch the parent birds feed their young for twelve consecutive hours, keeping a careful record of the number of feedings, and in so far as possible determining what things are fed, whether animal or vegetable matter. The following is a report made by two students of the Western State Normal School during the summer term of 1911. It is reproduced here exactly as it was handed in.

OBSERVATIONS OF A BIRD'S NEST.

July 10, 1911.

1. Length of observation.—12 hours.
2. Kind of bird.—Cat bird.¹
3. Number of young birds in the nest.—Four.
4. Number of feedings given the young ones in 12 hours:

First hour (6 to 7 a. m.)	9 feedings.
Second hour (7 to 8 a. m.).....	23 feedings.
Third hour (8 to 9 a. m.).....	22 feedings.
Fourth hour (9 to 10 a. m.).....	18 feedings.
Fifth hour (10 to 11 a. m.).....	² 11 feedings.
Sixth hour (11 a. m. to 12 m.).....	16 feedings.
Seventh hour (12 m. to 1 p. m.).....	³ 12 feedings.
Eighth hour (1 to 2 p. m.).....	12 feedings.
Ninth hour (2 to 3 p. m.).....	20 feedings.
Tenth hour (3 to 4 p. m.).....	20 feedings.
Eleventh hour (4 to 5 p. m.).....	30 feedings.
Twelfth hour (5 to 6 p. m.).....	21 feedings.
Total	214 feedings.

REMARKS.—All of the food was gathered in sight of the nest; and it seemed to consist of ants, crickets, grasshoppers, cabbage worms, plant lice, etc.; two, three, or four insects were often gathered at a time.

8. Enemies of birds and their control: (a) Snakes; (b) English sparrows; (c) cats;⁴ (d) hunters. What constitutes legitimate sport?

9. Protection: (a) Boxes; (b) feeding; (c) community sentiment; (d) control of enemies; (e) bird census.

10. Value of birds to community life, based on the results of feeding tests: In order to get an adequate idea of the value of a bird's nest to the community the following computation based on the above report is suggested. Suppose 100 of the insects fed the young in a day are cabbage worms, and they feed 10 days. A thousand have been destroyed. This, however, does not nearly give the results. Suppose these worms had been allowed to mature and become cabbage butterflies, each would have laid about 500 eggs, which would have hatched into half a million cabbage worms. One can hardly estimate the damaging powers of such an array of caterpillars. Half a dozen cat-birds' nests around the home are a power for good that can easily be underestimated.

11. Field study of birds in order to become acquainted with the common species under natural conditions.

II.—The insect problem.

1. Purpose of this study: (a) Chiefly economic (enemies and friends); (b) life story—(1) egg, (2) larva, (3) pupa, (4) adult; (c) beauty; (d) mechanism; (e) adaptations.

2. Insect pests: (a) Amount of damage done annually (U. S. Dept. of Agriculture reports); (b) list of most destructive insect pests in the community; (c) life histories of above insect pests; (d) natural enemies (birds, insects, insectivorous animals, etc.); (e) other means of control (importance of spraying); (f) common farm and garden insects—their life histories and control; list; (g) common insects injurious to fruit and fruit trees—(1) gnawing insects, (a) list, (b) arsenate of lead as a means of control, (c) Paris green, etc.; (2) sucking insects, (a) list, (b) kerosene emulsion, tobacco decoction, lime-sulphur as a means of control.

3. Beneficial insects: (a) How they are beneficial, and approximate value (estimate); (b) list of helpful insects and their life stories; (c) establishment of helpful life relations.

¹ Period of incubation, 18 to 21 days; number of days that the young birds remain in the nest, 5 to 10.

² Old bird on the nest 30 minutes on account of rain.

³ Bird on nest 15 minutes.

⁴ In another course the cat is studied in relation to the health problem.

4. Insects injurious to health: (a) Flies—(1) life story, (2) breeding places, (3) relation to typhoid fever, (4) history of typhoid epidemic at Chickamauga, (5) foot as a germ carrier, (6) screens, (7) methods of extermination; (b) mosquitoes—(1) life story: Egg, larva, pupa, and adult, (2) breeding places, (3) relation to malaria and yellow fever, (4) history of yellow fever in Habana, (5) history of malaria and mosquitoes in Roman Campagna, (6) how they carry the germs of malaria and yellow fever, (7) preventive measures and methods of extermination.

5. Simple methods of preparing school insect collections.

6. Use of common moths and butterflies in the lower grades for studying life stories.

III.—Most important fungous pests.

1. Purpose of this study: (a) Economic importance; (b) life story.

2. List of fungous pests.¹

3. Methods of control: (a) Lime, sulphur; (b) Bordeaux mixture; (c) the general problem of spraying (practical spray pumps and their approximate cost)—(1) its importance, (2) how and when to spray (the spray calendar), (3) comparative yield of sprayed and unsprayed crops.

IV.—Insectivorous animals.

1. Purpose of this study: (a) To find out what animal forms really do; (b) to establish helpful life relations.

2. List of insectivorous animals.

3. Food of insectivorous animals.

4. Life story of a few of the most common.

5. Value in dollars and cents to the rural community (estimated).

6. Which to encourage and which to destroy.

V.—Study of common shade and forest trees.

1. Value of a tree: (a) Economic; (b) aesthetic.

2. Trees best adapted for shade.

3. Planting about school and home.

4. Care of the trees.

5. List of species in the neighborhood.

6. Outdoor study of trees (know them in their native haunts).

7. General problem of forest preservation and reforestation.

VI.—The school garden.

1. Reasons for having a garden: (a) For practicing what has already been learned in the nature work; (b) for directed exercise and recreation; (c) for giving the pupil an opportunity to fall in love with a growing plant which he calls his own and which by his own efforts is made of most worth; (d) for the self-poise and moral fiber that come from a feeling of ownership, which is the best developer of a respect for the property rights of others.

2. Location of the garden.

3. Plan of the garden.

4. Things to plant in the garden (varies with the grade).

5. Preparation of the soil for planting.

6. Cultivation.

7. Tools.

8. General care of the garden.

¹ The bacteria in relation to the health problem are treated in the course in sanitary science.

ELEMENTARY AGRICULTURE.

Agriculture is the chief industry of the Nation, and its progress depends largely upon our ability to develop more fully and better the agricultural possibilities of the country. Inadequate systems of farming and ill-adapted agricultural practices are to-day the rule. They should be the exceptions. There is general admission that the farmer's returns from his efforts are far less than they would be if proper scientific management and principles were applied in his work. The natural conditions of soil, rainfall, temperature, and season in the South are almost ideal for a great variety of crops, and with practical farm husbandry this section can excel in the production of many staple agricultural products. That we are not excelling, or in some instances even considered competitors in producing those crops in whose growth we should be leading, is brought out in every published report either State or National. As an example, take the yield of corn in Kentucky. In 1910 the average per acre was 29 bushels. While this compares very favorably with other Southern States, it is far short of our possibilities. There is not a New England State that did not average during the same year at least 40 bushels. On the whole our soil and climatic conditions are more favorable than those of New England. The reason that we come short of a much higher production must be in our system or rather the lack of any general practical system of farm management.

The application of a few practical principles of agricultural science, carefully demonstrated in each rural community, can not help giving marked improvement as a result. It is certainly not going too far to ask that the rural school give careful consideration and attention to this important problem. If handled in the right way by a skilled teacher with the necessary training, the mastery and application of the elementary practical principles and practices of agriculture can be made. Such work would very materially increase the aggregate returns from the farm. Take, for example, instruction in corn growing. The record following taken from a bulletin of the United States Department of Agriculture gives the results achieved by farmers' boys by the application of practical instructions in this work. The results are the best proof of the value of their teaching.

Records of State prize winners in growing corn in 1910.

Names and addresses.	Character of soil.	Yield.	Cost per bushel.
		<i>Bushels.</i>	<i>Cents.</i>
Hughey Harden, Banks, Ala.....	Sandy, clay subsoil.....	120	32
Ira Smith, Silver, Ark.....	Sandy loam.....	119	8
Joseph Stone, Center, Ga.....	Yellow clay.....	102½	29
Stephen Henry, Melrose, La.....	Sandy.....	139½	13.6
Wm. Williams, Decatur, Miss.....	Second bottom.....	146½	18
Ernest Starnes, Hickory, N. C.....	Dark sandy loam.....	146½	27
Floyd Gayer, Tishomingo, Okla.....	Black sandy loam.....	95½	8
Jerry Moore, Winona, S. C.....	Gray, sandy upland.....	228½	43
Maurice Olgers, Sutherland, Va.....	Gray upland.....	168	40
Norman Smith, Covington, Tenn.....	Sandy, clay subsoil.....	125½	37
Rodger Smith, Karnes City, Tex.....	Black river bottom.....	83½	13½
Archie Odom, Bennettsville, S. C.....	Dark sandy loam.....	177	23
Jno. Williams, Tuscaloosa, Ala.....	Dark sand, clay beneath....	83½	49

Any schoolboy can equal the record of any of the above boys if he has an equal opportunity. All that is lacking is the dissemination of knowledge and the practical application of this knowledge to agriculture. This the rural school should do. Canada's rural schools increased the average wheat yield there 5 bushels to the acre in a few years' time. Suppose that our rural school teachers should set for themselves the problem of increasing the corn crop 5 bushels per acre, what would be the result? Let us see. In 1910 the farmers of Kentucky planted and cultivated 3,630,000 acres of corn, which yielded 105,270,000 bushels. An increase of 5 bushels per acre would have made the yield 18,500,000 bushels more. These 18,500,000 bushels of corn would have brought, at the average farm price December 1, 1910, approximately \$10,000,000. This money would have gone directly to the rural communities, where it is much needed, and would have been of vast importance in solving the problems that confront our rural people. It could have been used to build 2,000 miles of first-class pike roads, or it would have paid the expenses of our public schools for two and a half years. It would have gone far toward paying the farmers' taxes, or it would have built and furnished many a rural home. Can anyone figure the comfort and happiness that 5 bushels more of corn per acre would buy for the rural people of any State?

What the rural schools can do for improving corn culture they can do for any other farm crop, if they adopt a rational course of study and demand teachers who can teach them effectively and efficiently. Fortunately, practical principles of agriculture are neither difficult to learn nor irksome to teach. The subject appeals to rural pupils because it comes within the scope of their immediate interests. Rural life can be wonderfully improved by the united efforts of teachers to promote real, genuine, uplifting thrift through instruction in the principles and practices of agriculture. To teach these principles the

teacher must have had a thorough preparation in this special field. The course of study that follows is designed to give this preparation:

COURSE OF STUDY FOR TEACHERS OF AGRICULTURE.

I.—The plant (elementary study in relation to activities).

1. Parts: *a.* Roots and root hairs in relation to absorption of foods; *b.* stems—(1) character of each (annual, biennial, perennial), (2) uses and functions, (3) structure; *c.* leaves—(1) types, (2) structure; *d.* seed—(1) germination, (2) dispersal.

2. Constituents of plants and their characteristics: *a.* Organic; *b.* inorganic; *c.* organic and inorganic elements necessary to growth.

3. Source of plant foods and the way in which plants get them.

II.—The soil (in relation to plant growth).

1. Importance as a natural resource.

2. Principles to be mastered in order to understand the soil—geological, biological, chemical, physical.

3. Origin: Forces in nature that have produced soil—weathering, winds, water, heat and cold, etc.

4. Constituents: (*a*) Inorganic matter—(1) rock particles (body of soil), (2) chemicals (substances more or less soluble in water): (*a*) Lime, (*b*) nitrogen, (*c*) potash, (*d*) phosphoric acid. (Special study of each of these because they are most important. Mention need only be made of the long remaining list.) (*b*) Organic matter; life of soil; humus; plants and animals in a state of partial decay—(1) Importance: (*a*) Plant food and its availability, (*b*) moisture-holding capacity, (*c*) relation to temperature, (*d*) relation to physical condition, (*e*) relation to washing and leaching, (*f*) general problems of tilth, (*g*) origin of humus (barnyard manures, green manures).

5. Physical properties of soils: (*a*) Heavy soils, (*b*) light soils—experiments and demonstrations illustrating these properties; (*c*) water-holding capacity in relation to fineness; (*d*) effect of drying; (*e*) dust mulch.

6. Soil depletion: (*a*) Constituents that may be lost—(1) lime, (2) potash, (3) phosphoric acid, (4) nitrogen, (5) humus, (6) body; (*b*) amount of plant food removed from soil by various crops; (*c*) how constituents are lost—(1) washing, (2) leaching, (3) single cropping, (4) careless husbandry, (5) taking all off and putting nothing back.

7. Soil conservation and reclamation: (*a*) Importance (history of effects of loss of soil to agricultural purposes); (*b*) best means of preventing washing or leaching—(1) deep plowing and subsoiling, (2) cover crops, rye, wheat, winter oats, crimson clover, etc.; (*c*) best means of replacing humus—(1) barnyard manures, (2) green crops: (*a*) cowpeas, (*b*) soy beans, (*c*) clovers, (*d*) alfalfa; (*d*) best means of replacing mineral plant foods—(1) nitrogen: (*a*) leguminous crops (as above), fixation of nitrogen, (*b*) barnyard manures; (2) phosphoric acid, crushed rock phosphate, (3) potash (must be bought and put into soil), (4) lime: (*a*) use in agriculture, (*b*) caustic lime, (*c*) crushed limestone; (*e*) commercial fertilizers—(1) composition: (*a*) filler, (*b*) plant food—(1) nitrogen, (2) potash, (3) phosphoric acid; (*c*) uses of (*a*) and (*b*) (2) adaptation to soil and to crop, (3) guaranteed analysis, meaning and importance, (4) when it is profitable to use commercial fertilizers and when it is not, (5) price of the various plant foods in relation to the cost of commercial fertilizers, (6) use of nitrogen, potash, and phosphoric acid as a plant food, (7) effect of lime on soil: (*a*) physical, (*b*) availability of other plant foods, (*c*) humus, (*d*) sourness; (8) does it pay in the end to use commercial fertilizers? (*f*) rotation of crops—(1) value and importance, (2) various systems best adapted to soil, climate, and other conditions; (*g*) value of live stock in improving the farm; (*h*) careful and thoughtful husbandry of farm resources; (*i*) adaptation of crops to soil, climate, etc.; (*j*) work of animals in improving the soil.

8. Study of the various kinds of agricultural soils as to (a) components: Sand, silt, clay, humus; (b) physical properties; (c) plant food; (d) water-holding capacity; (e) endurance; (f) adaptation to various phases of agricultural pursuits.

III.—Preparation of the soil for seed.

1. Plowing: (a) Reasons for plowing; (b) depth; (c) time of plowing in relation to crop; (d) study of various types of plows; (e) subsoiling.

2. Pulverizing: (a) Relation to moisture, plant food, intertillage, etc.; (b) depth; (c) implements.

3. Intertillage: (a) Purpose; (b) effects of deep and of shallow cultivation; (c) dry farming and dust mulch.

IV.—Seed selection.

1. Importance in improving crops.

2. Methods and demonstrations of germination tests.

3. Importance of proper varieties.

4. Importance of selected strains in any variety.

V.—Study of the most common weeds and their seeds.

Best methods of their control.

VI.—Study of the most important field and forage crops.

Corn, wheat, oats, tobacco, cotton, potatoes, vegetables, small fruits, etc.—with the best methods for their profitable production.

VII.—Study of live stock as a farm resource.

1. Value of stock per se.

2. Value of stock in maintaining the fertility of the soil. (Manures.)

3. The dairy herd: (a) Types and breeds of dairy cattle (What is a good dairy cow?); (b) computing the ration; (c) the Babcock test; (d) value of manure and how to save most of it for the farm; (e) methods of applying manure to soil, and their relative values.

4. Beef cattle and their husbandry.

5. Other live stock and its importance, with a study of best types to meet conditions.

6. The stock barn: (a) Importance; (b) plans and specifications of various types most profitable in feeding stock; (c) location with reference to other buildings, drainage, convenience, water supply, etc.

7. Pastures; study of various grasses and other plants best suited for grazing, with directions for their easy propagation.

8. Feed stuff. Analysis in relation to result sought. (The balanced ration): (a) Corn; (b) hay, fodder, ensilage, peas, etc.; (c) cottonseed meal and hulls, etc.

9. Poultry: (a) Types and breeds; (b) care and management.

VIII.—The orchard.

1. Location in relation to—(a) slope; (b) drainage; (c) climatic conditions.

2. Soil. Study of kinds best adapted to various fruits.

3. Careful study of varieties of each fruit to find those best suited to locality.

4. Study of different kinds of trees, that the student may learn what a good nursery tree is.

5. Preparation of soil for planting the orchard: (a) Plowing and subsoiling; (b) pulverizing; (c) fertilizing.

6. Plan of the orchard.

7. How to properly plant a fruit tree.

8. Pruning.

9. Cultivation of orchard.

10. Study of principal insect and fungous pests of trees and fruits, with directions for their control. (Spraying and spraying outfits.)

IX.—The Corn Club.

The following directions are given after careful working out for the use of boys in competitive corn growing. (These may be modified to suit local conditions.)

DIRECTIONS FOR COMPETITIVE CORN GROWING.¹**Breaking land.**

Land, if sod, is to be plowed not less than 6 inches deep. All other land not less than 7 or 3 inches deep.
(In both instances preferably deeper.)

Preparation for planting.

1. Harrow with drag harrow.
2. Double-disk both ways. (Use cultivator if you have no disk.)
3. Harrow with drag harrow again. (Repeat every 10 days or two weeks until planting time.)

Planting.

1. Check with planter 3 feet 8 inches each way.
2. If planter can not be used, lay off the ground 3 feet 8 inches each way, 3 inches deep with single-shovel plow, and cover by hand. If covered with drag, harrow immediately with tooth harrow.
(No corn to be planted over 3 inches deep.)

Time of planting.

Depends upon local conditions, latitude, etc.

Cultivation.

1. Harrow 4 or 5 days after planting, if weather permits.
2. Cultivate with fine-tooth cultivator, if one is available, until corn becomes too large.
3. If no fine-tooth cultivator can be had and a disk cultivator is available, use it for first two cultivations; then use bull tongues.
4. If one-horse cultivation, use small harrow preferably, or double-shovel with bull tongues.
5. When corn is too large for two-horse cultivator, use a small harrow or drag between rows.
6. Cultivate each week until corn tassels.

Very important.

Never cultivate over 2 inches deep.
Never work in ground that is too wet.

Summary by the teacher of work and money spent by each boy in his work.

(This becomes a part of the teacher's records.)

Division No..... Subdistrict No..... Name of boy..... Post office, 1. Kind of land, bottom or high..... 2. Date of breaking ground..... 3. Depth of breaking.....inches. 4. Preparation for planting..... 5. Date of planting..... 6. Width of rows.....feet. 7. Drilled or checked?, 8. Number of loads of stable manure..... 9. Was manure broadcast or in hill?..... 10. Kind and amount of fertilizer used..... 11. How used..... 12. Kind of tools used in cultivation from first to last..... 13. How many times did he harrow before planting?..... After?..... 14. How many times did he roll the ground? Depth of cultivation..... 15. Did he get good stand?..... Why not?..... 16. Was growth of corn hindered in any way?..... What way?..... 17. Did it rain enough?..... Did it rain too much?..... 18. What was the last work in cultivation?..... 19. How large was corn when worked last?..... 20. Could corn have been better?..... What hindered or prevented?..... 21. How much land in his lot?.....acres. One patch or two?.....	In this square teacher may draw plat of corn lot, giving dimensions. <div style="border: 1px solid black; height: 250px; width: 100%; margin-top: 10px;"></div>
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¹ This is the form used by the agricultural department of the Western Kentucky State Normal School.

22. Teacher will please take line 16½ feet long and measure the plat. Draw a diagram in the square above, giving dimensions.
23. How many measures of corn gathered from his lot? The measure to be a 5-bushel salt barrel.
24. The teacher will superintend the gathering of one patch, the trustees one, and a person selected by them the third. The barrel must be filled, then shaken well one time, then filled again level with the top. This is one measure.
25. Corn must be gathered on 4th of November.

Premiums were offered in this contest as follows: Greatest quantity of corn produced by one boy on his plot, \$20 in gold; second greatest quantity, \$10 in gold; third quantity, \$5 in gold. For the best 10 ears exhibited at the corn show on State Normal Heights, November 18, 1911, \$20 in gold; for second-best 10 ears, \$10 in gold, and for the third-best ears, \$5 in gold.

Teacher.

X.—Corn judging. (What is a good ear of corn?)

Characteristics of various varieties of corn.

Corn Score Card.¹

Name of variety.....

Class..... **Sample number**.....

[illegible]**Remarks:**

XI.—Farmers' day.

A day set apart for the assembling of all interested in better agriculture in the community.

Features of the day: (a) Corn-judging contest; (b) awarding of prizes in corn-growing contest; (c) exhibit of best 10 ears grown by each boy; (d) demonstration of Babcock milk test by pupils; (e) demonstration of cooking, sewing, etc.; (f) lecture by a prominent citizen or other practical agriculturist; (g) any practical features that help to make the school a center of rural uplift; (h) organization of club for ensuing year.

Demonstration work: (a) School farm, under scientific management; (b) plots for each individual student for the application of principles discussed in class and laboratory work.

SANITARY SCIENCE AND HEALTH.

The thing of first importance for anyone to know is "how to live and keep well." It follows, therefore, that the subject of health and hygiene should be of first consideration, for sanitary conditions at this stage of human development are far from what they should be. The following extracts from numerous reports on vital statistics need the attention of our schools. "In civil life in the United States there is an average of 1,500,000 deaths every year, with 4,200,000

¹ Form adopted by the Kentucky Agricultural Experiment Station.

constantly sick, involving the comfort and well-being of 5,000,000 homes and 25,000,000 people." Such a condition is appalling. At any given time more than one person in every four is suffering either in body or mind or both from sickness of some sort. Many political economists have made thorough study of this matter, and all agree that Dr. Irving Fisher is right in saying that more than one-third of this annual sick and death rate, representing a tax of inordinate proportions upon the resource of the Nation, is caused by diseases that could, with a little attention and instruction in the school, be effectually prevented. Is it not a primary duty of the school which claims to prepare teachers for useful work in any community to give instruction along the lines of rational prevention of disease? It is especially important that the teacher of a rural school be so trained, for in the community where his school is located the advantages and precautions ordinarily exercised by municipalities do not exist. As a concrete example of health conditions, take Kentucky, and see what the report of the State board of health shows:

	Cases.	Deaths.
Tuberculosis.....	13,436	6,541
Typhoid fever.....	18,387	1,818
Diphtheria.....	10,980	2,336
Diarrheal diseases among infants.....	18,240	1,642
Dysentery (adults).....	19,624	840
Scarlet fever.....	1,800	160

From the monthly report of the bureau of vital statistics for the first eight months of 1911 we find that 50 deaths out of every 100 were unnecessary and could have been prevented. I do not believe that the conditions are any worse in Kentucky than they are in any other State. Great men in diplomacy and government have caused to be shaped into universal laws this truth: "The care of the public health is the first duty of every statesman."

If this be true, is it not the teacher's first obligation?

Wise legislators long ago incorporated into statutory law this mandate: "You shall teach physiology in the public school to the end that the individual and general health of the community may be made better thereby." Had they known the nature of our course of study to-day they would have assigned a different reason or left it out altogether. How we have plunged our pupils into a maze of technical detail from which few ever emerge. And if they do, how much better are the health conditions of the community made thereby? We teach them things that often the surgeon or doctor does not care to know. Surely the elementary teacher's preparation is sorely deficient if he does not know how to prevent "preventable diseases," or understand the common laws governing sanitary conditions, and has not the enthusiasm to teach this knowledge. The

school that prepares him for his work should see to it that he gets both the academic training and the enthusiasm.

The following outline is intended to show those points in sanitary science that we think a rural school teacher should know in order to be able to do efficient work in this line:

COURSE IN SANITARY SCIENCE.

1. The health conditions in the community.
(Study of reports of State board of health.)
2. List of preventable diseases most important to the people: (a) Tuberculosis; (b) typhoid; (c) diphtheria; (d) pneumonia; (e) diarrhoeal diseases among infants; (f) dysentery among adults; (g) scarlet fever; (h) smallpox; (i) malaria; (j) hookworm disease.
3. Cause of the above and other diseases of their kind.
(What is a preventable disease?)
4. Study of germ life, with emphasis on forms that produce disease: (a) Biological relations; (b) structure—size, shape, motion, method, and rate of growth, etc. (lantern-slide illustrations); (c) conditions favoring growth of disease germs (warmth, moisture, food, and absence of light); (d) aërobic and anaërobic germs; (e) carriers of germs; (f) how disease-producing germs get into the human system.
5. What constitutes insanitary conditions?
6. What constitutes sanitary conditions (lantern-slide illustrations)?
7. Typhoid fever as a type study: (a) General—(1) number of cases (indicating frequency of disease), (2) number of deaths (indicating mortality of the disease); (b) cause (typhoid germs taken in food or drink)—(1) insanitary conditions conducive to typhoid, (2) examples of typhoid epidemics and discussion of conditions that caused them ("Principles of Sanitary Science"—Sedgwick); (c) carriers of typhoid germs—(1) water, how infected? (2) milk, how infected? (3) other food, how infected? the house fly (see outline under nature study, p. 11), (4) typhoid carriers; (d) prevention—(1) drinking water, (2) drainage in relation to water supply and outbuildings, (3) milk, (4) destruction of flies, (5) screens.
8. Outlines similar to the above are followed in the study of tuberculosis, diphtheria, scarlet fever, malaria, etc.
9. Best convenient ways to secure sanitary drinking water.
10. Milk and its products, from the sanitary standpoint.
11. The problem of ventilation.
12. Location and construction of dwelling houses and barns with reference to healthfulness.
13. Practical ways of securing a good water supply for domestic use.
14. Sewage and sewage disposal.
15. The problem of foods and dietetics.
16. Fundamental principles of domestic and community hygiene.

PRACTICAL CHEMISTRY APPLIED TO RURAL LIFE.

The science of chemistry is intimately connected with all of those industrial arts so necessary to the comfort, health, and general welfare of mankind. So vital, indeed, is this connection with the ordinary problems of farm life, both in the home and in that out-of-doors, that any course of study which leads to a better training along the lines of successful home building and intelligent husbandry is

incomplete without an elementary study, at least, of some of the more practical phases of the subject. This does not mean that chemistry as such is, or should be, any part of the course of study for the rural schools, but it is unquestionably true that such a course as is here outlined has a real place in the curriculum of any school that essays to prepare teachers for the richest and best service in the country schools. The teacher who would teach successfully the subjects of nature study and agriculture, or instruct efficiently in physiology from the sanitary and practical standpoint should know something of the chemistry of plant and animal life. Likewise instructors in domestic science should have more than a superficial knowledge of those elementary changes that lie at the bottom of any successful study of the problems of food, clothing, and cleanliness which mean so much to the success and happiness of the human race.

This course is planned to correlate with the courses in agriculture, nature study, and sanitary science herein given, and with any elementary course in domestic economy. The work should be given by a series of lectures with fitting illustrations, experiments, and references to standard works on the contained topics.

The aim of the work has been to approach the subject from the practical standpoint. But we believe that it is possible to give an elementary course in a practical way, and at the same time give real cultural value to the subject. Hoping that, in addition to the above aim, a completion of the course may lead the student to an appreciation of the broader fields of the subject, we offer the following:

COURSE IN CHEMISTRY FOR RURAL SCHOOL TEACHERS.

I.—General phases.

1. Properties of matter.
2. Change: (a) Physical; (b) chemical—(1) conditions, (2) aids; (c) laws of change.
3. Classification of substances: (a) Elements; (b) compounds; (c) mixtures.
4. States of matter: (a) Gases—(1) weight, (2) diffusion and pressure; (b) liquids; (c) solids; (d) changes of state; causes and effects.
5. Classification of compounds: (a) Acids—(1) organic, (2) inorganic, (3) neutralization of; (b) bases (alkalies); (c) salts; (d) neutrals.

II.—Air.

1. Physical properties.
2. Composition: (a) Nitrogen—(1) relation to plant life, (2) chief compounds; (b) oxygen—(1) relation to animal life, (2) combustion; condition, products, uses in nature and in the life of man; (c) miscellaneous material—Argon, water, carbon dioxide, etc.

III.—Water.

1. Properties—Chemical and physical.
2. Solvent: (a) Conditions; (b) amount possible.
3. Impurities: (a) Organic—test for; (b) inorganic—(1) lime, (2) magnesia, (3) potash, (4) iron, (5) chlorides, (6) sulphates; (c) hardness—causes and removal.

IV.—Soil.—General discussion only. (See outline of course in agriculture.)

V.—Carbon and its compounds.

1. Carbohydrates: (a) Cellulose—(1) composition, (2) properties, (3) occurrence, (4) uses in industrial life; (b) starch—(1) properties, (2) occurrence, (3) use, (4) tests, in plant life, in animal life, (5) analysis of potato; (c) sugar—(1) properties, (2) occurrence, (3) common kinds: cane, malt and milk, glucose.

2. Hydrocarbons: (a) Alcohols—kinds and uses; (b) acids; (c) fats.

3. Proteids—(organic nitrogen compounds): (a) Protein in milk (casein); (b) collagen—gelatin; (c) egg albumin; (d) legumin from peas and beans.

4. Milk: (a) Composition; (b) tests for adulterations; (c) percentage of butter fat (Babcock milk test); (d) products.

VI.—Chemistry of bread making.

1. Fermentation.

2. Yeast.

3. Simple chemical reactions: (a) Baking powder; (b) cream of tartar; (c) soda; (d) requirements under pure-food-law.

VII.—Chemistry of cleaning.

1. Cleaning agents: (a) Soap—(1) kinds, (2) process of making, (3) uses; (b) organic compounds; (c) acids.

2. Stains: (a) Kinds—(1) acid, (2) alkali, (3) iron rust, (4) mildew, scorch, etc.; (b) removal—general and specific directions.

3. Disinfectants, antiseptics, and deodorizers: (a) Natural—(1) sunlight, (2) dry air, (3) heat; (b) chemical—charcoal, lime, carbolic acid, mercuric chloride, peroxide of hydrogen, etc.

VIII.—Illumination and heat production.

1. The flame: (a) Conditions; (b) structural.

2. Illuminants and fuel: (a) Coal; (b) gas; (c) wood; (d) oil; (e) alcohol; (f) acetylene.



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MATHEMATICS AT WEST POINT AND ANNAPOLIS

INTERNATIONAL COMMISSION ON THE TEACHING
OF MATHEMATICS

THE AMERICAN REPORT

COMMITTEE No. XI

WASHINGTON
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THE AMERICAN REPORT

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MATHEMATICS AT WEST POINT AND ANNAPOLIS

GENERAL REPORT

Of all the technical schools in the United States, probably none exists whose aim is so clearly defined as that of our two great Government schools for the training of officers for the United States Army and Navy. The purpose of these schools is strictly utilitarian, viz, to give to a selected number of young men of this country the best possible technical training for the positions of responsibility in the Army and Navy. That these schools do their work well is amply demonstrated by the efficiency of our military and naval forces.

It is always of interest to see how a school fulfills its aim, how it adjusts its subject matter to meet the particular task in hand, and how it eliminates that which detracts from the main purpose. To teachers of mathematics such an investigation will be of particular interest, especially in view of the tendency of a number of modern educators to demand a justification of every topic in the curriculum. It is the purpose of the two reports submitted herewith to give such an exposition of the teaching of mathematics in these two great schools, the United States Military Academy at West Point and the United States Naval Academy at Annapolis, these being the only schools of the kind in the United States.

These reports will repay a careful reading; they are suggestive to all teachers not only in details of class organization, but in the general handling of subject matter to serve a definite purpose. They will also show why mathematics has so long held and still retains its prominent place in the training of military and naval officers.

To those who are familiar with similar schools abroad, it will be of great interest to compare the aims and results of instruction in mathematics in a famous Government school like the *École Polytechnique*¹ of Paris with those found in West Point and Annapolis. In the French school the greatest prominence is given to purely theoretical instruction in higher mathematics, with a very limited amount of practical application; in our two schools few topics are taught beyond the essentials of the calculus, and the practical problem is the basis and end of all the work.

¹ The work of the *École Polytechnique* is described in the report of the French Committee (published by Hachette, Paris) of the International Commission on the Teaching of Mathematics.

REPORT OF SUBCOMMITTEE 1

MATHEMATICS IN THE TRAINING OF ARMY OFFICERS, INCLUDING SCHOOLS FOR GRADUATES OF WEST POINT

The training of Army officers is carried on in the following schools: (1) The Undergraduate school at West Point; (2) the Engineer School at Washington Barracks; (3) the Ordnance School at Sandy Hook, N. J.; and (4) the Coast Artillery School at Fort Monroe.

I. THE UNITED STATES MILITARY ACADEMY

HISTORICAL SKETCH

The United States Military Academy, established in 1802, is situated at West Point, N. Y. It is a school for the practical and theoretical training of cadets for the military service. The students of the academy are known as "cadets." Upon completing its course satisfactorily cadets are eligible for promotion and commission as second lieutenants in any branch of the military service of the United States. The Corps of Cadets as now constituted consists of 1 from each congressional district, 1 from each Territory, 1 from the District of Columbia, 1 from Porto Rico, 2 from each State at large, and 40 from the United States at large, all to be appointed by the President. Those cadets appointed from States or Territories must be actual residents of the congressional or Territorial districts, or of the District of Columbia, or of the States, respectively, from which they are appointed. Four Filipinos, one for each class, are authorized to receive instruction as cadets, to be eligible on graduation to commissions only in the Philippine Scouts. Under the apportionment of Members of Congress, according to the Twelfth Census, the maximum number of cadets is 533.

The total number of graduates from 1802 to 1909, inclusive, is 4,852.

ENTRANCE REQUIREMENTS

The United States Military Academy is the only school in the country that has for its sole object the furnishing of commissioned officers to the United States Army. From the method of selection of appointees referred to above, it is reasonable to believe that the Military Academy receives a more varied class of students and one more broadly representative of all the States than any other educational institution in the country, except the similarly constituted Naval Academy at Annapolis.

Entrance to the academy is by examination. The scope of the entrance requirements in mathematics is as follows:

Algebra.—Candidates will be required to pass a satisfactory examination in that portion of algebra which includes the following range of subjects: Definitions and notation; the fundamental laws; the fundamental operations; factoring; highest common factor; lowest common multiple; fractions, simple and complex; simple or linear equations with one unknown quantity; simultaneous simple or linear equations with two or more unknown quantities; involution, including the formation of the squares and cubes of polynomials; binomial theorem with positive integral exponents; evolution, including the extraction of the square and cube roots of polynomials and of numbers; theory of exponents; radicals, including reduction and fundamental operations, rationalization, and equations involving radicals; operations with imaginary numbers; quadratic equations; equations of quadratic form; simultaneous quadratic equations; ratio and proportion; arithmetic and geometric progressions. Candidates will be required to solve problems involving any of the principles or methods contained in the foregoing subjects.

Plane geometry.—Candidates will be required to give accurate definitions of the terms used in plane geometry, to demonstrate any proposition of plane geometry as given in the ordinary textbooks, and to solve simple geometric problems either by a construction or by an application of algebra.

These entrance examination papers are prepared at the academy. They are furnished to examining boards of Army officers convened annually at such places as the War Department may direct. The examinations are thus held at points widely distributed over the United States and its dependencies. All papers are sent to the Military Academy for correction.

DISTRIBUTION OF TIME

A cadet when admitted to the Military Academy must be over 17 and under 22 years of age. He pursues a course of study lasting 4 years and 3 months.

The instruction in pure mathematics extends from entrance on March 1 to March 1 two years later.

This time is subdivided as follows:

	Periods.
Review of plane geometry.....	6
Solid geometry.....	31
Algebra	85
Trigonometry, plane and spherical.....	31
Analytic geometry, plane and solid.....	80
Descriptive geometry.....	62
Differential and integral calculus and theory of errors.....	95

Each period is 1 hour and 20 minutes long.

The instruction in applied mathematics is distributed through the last three years of the undergraduate curriculum, except that surveying follows immediately upon the completion of trigonometry.

The time assigned to each subject is as follows:

	Periods.	Hours in each period.
Theoretical surveying.....	20	1
Practical surveying (in field).....	13	4
Analytical mechanics.....	104	.....
In laboratory.....	21	2
In recitation room.....	83	1½
Sound, light, and astronomy.....	108	1½
Mechanics of engineering.....	91	1½
Ordnance and gunnery.....	94	1½

EXTENT OF COURSE IN PURE MATHEMATICS

The course in pure mathematics as laid down in general terms in the regulations of the academy is:

Geometry. Problems in plane geometry. Geometry in space; planes, lines, polyhedrons, cylinders, cones, and the sphere.

Algebra. Detached coefficients, factoring, linear and quadratic equations, graphic representation, the binomial theorem, inequalities, theory of exponents, complex numbers, ratio and proportion, variation, progressions, series, undetermined coefficients, logarithms, the slide rule, interest, combinations, probabilities, determinants, and the theory of equations.

Trigonometry. The measurement of angles, the simple trigonometric functions, the functions of several angles, trigonometric equations, and the solution of plane and spherical triangles.

Analytic geometry. In the plane: Systems of coordinates, change of axes, anharmonic ratios, the straight line, the circle, the parabola, the ellipse, the hyperbola, the polar equation of the conic, the general equation of the second degree, systems of conics, and envelopes. In space: Systems of coordinates, transformations of coordinates, the plane, the straight line, surfaces of the second degree, and plane sections.

Descriptive geometry. Orthographic projections: Points, right lines and planes, problems on their relative positions, the revolution of objects, curves in space (especially the circle and cylindrical helix), surfaces (including ruled surfaces and surfaces of revolution), tangent planes, intersection of surfaces, trihedrals. Spherical projections. Shades and shadows. Central projections or perspective. Isometric projections.

Differential and integral calculus. The theory of limits, differentiation of the standard elementary forms, simple applications of the derivative to velocity and rates, maxima and minima, curvature, evaluation of indeterminate forms, envelopes, expansion of functions, curve tracing, tangent planes, and normal lines to surface. The fundamental principles of integration, the integration of the standard forms, the measurement of arcs, areas, and volumes, mean values, approximate integration, ordinary differential equations.

Method of least squares. Errors to which observations are liable, the correction of observations, the probability curve and its equation, measures of precision, the deduction and the application of the formulas for probable and mean error, weights of observations, and the formation of equations of condition and normal equations.

The course of mathematics as outlined above is compulsory for all students and the time devoted to the subject is the same for all. A marked difference, however, is made in the amount and the difficulty of the matter required of students differing in ability.

This is accomplished in the following way: Upon admission the students are arranged in sections of 10 to 12 in order of ability as shown by their marks on their entrance examination in mathematics. This is a tentative grading of no great value, and in consequence all sections have identical courses until the examination which takes place at the end of the first three months. At that time a well-defined grading according to mathematical ability is possible. Each class is then separated into three subdivisions, known as upper, middle, and lower thirds.

A standard course in mathematics has been set for the lower third that is believed to contain the minimum of knowledge, a proficiency in which will insure that the student can intelligently pursue the applied courses that follow. A more extended course is provided for the middle third. A still more comprehensive course is provided for the upper third, one that is expected to give a thorough foundation in pure mathematics for all subsequent undergraduate and graduate work.

The difference in the courses for the groups of a class appears in the use of a more comprehensive or difficult textbook for the abler student, or, if the same text be used, in an omission of the more difficult subjects for the less able; also in the grading of the illustrative problems and exercises assigned to the different groups; also in a further advance into the theory of the subject by the abler student, even to the inclusion of an additional branch of mathematics.

Transfers of students are freely made from time to time between the sections in each group and less frequently from one group to another. These transfers are based upon the quality of the work performed by the student as proved by his daily tasks, oral and written. Each group is thus induced to strive for the full development of its mathematical powers.

A daily alternation throughout the course, where possible, of two subjects—usually one geometric and the other analytic—and toward the end of the mathematical course a similar alternation of mathematics with the course in mechanics enable the various branches to supplement and assist each other and also give the student more time for the digestion of each subject or for concentration upon the one that demands of him the greater labor.

In the fifth class algebra alternates with plane and solid geometry. In the fourth class algebra alternates with plane and spherical trigonometry. Later, analytic geometry alternates with descriptive geom-

etry. In the third class the course in the calculus and least squares alternates during its latter portion with the subject of mechanics.

PURPOSE OF TEACHING MATHEMATICS

The extent of the mathematical curriculum is determined primarily by the requirements of the succeeding scientific courses in this academy and at the graduate schools for engineers, ordnance and artillery officers.

Remarks on the purpose of the study of mathematics have been variously given in the following extracts:

(From report of Congressional Committee on Military Affairs, 1834.)

Mathematics is the study which forms the foundation of the course. This is necessary, both to impart to the mind that combined strength and versatility, the peculiar vigor and rapidity of comparison necessary for military action, and to pave the way for progress in the higher military sciences. All experience shows that the mind, in order that it may act with efficiency, must be accustomed to exertion. It should be taught gradually to develop its own powers, and as it slowly learns their capacity and the manner of employing them, the increasing lights which are thrown upon its course will enable it to go on for an unlimited extent in the path of improvement.

(From a report of the Academic Board of the Academy, 1843.)

The academic board believe that one of the most important objects of the academy is to subject each cadet, previous to his promotion to a higher grade in the Army, to a thorough course of mental as well as military discipline, to teach him to reason accurately, and readily to apply right principles to cases of daily occurrence in the life of the soldier. They are satisfied that a strict course of mathematical and philosophical study, with applications to the various branches of military science, is by far the best calculated to bring about this end, and that the present scientific course at the academy, the result of the experience of many years, is in its main features such a course. They are aware that many of the cadets, as is the case with most of those who pursue a scientific course at other institutions, will have little occasion to make practical applications of the many mathematical formulæ with which they meet, and that they may have passed over particular problems without thoroughly understanding their meaning in all their important points; still, if the course has been carefully taught, the reasoning faculties will have been strongly exercised and disciplined, and a system and habit of thought acquired which are invaluable in the pursuit of any profession, and as desirable for the infantry or dragoon officer as for any other officer in service.

(From a report of Prof. Church, 1860.)

I consider the course of mathematics as now taught to all who pass their final examination sufficient to enable the cadet to acquire a thorough knowledge of all the courses which follow it, and not more than sufficient to enable him to study with advantage the courses of natural and experimental philosophy, engineering, and ordnance and science of gunnery. Moreover, I regard the mental training of the pupil as one of the great objects of the study of mathematics, a training particularly required by the officer of every corps of the Army, and to which many of them owe their distinguished success; and I believe that the scientific reputation of the academy depends in a great degree

upon the thoroughness and extent to which the mathematics and its applications to other sciences are taught, and to diminish them would seriously affect this reputation and the success of the institution.

(From a report of Prof. Bass, 1896.)

The object of the mathematical instruction in this academy is primarily to prepare the pupil for the study of mechanics, wave motion, astronomy, electricity, ordnance and gunnery, and engineering. In addition the study of mathematics develops the reasoning faculties and establishes a mental foundation upon which any branch of knowledge may safely and rapidly be constructed.

(From a report of Prof. Echols, 1907.)

It has been thought best in the past to educate all of our officers in the same institution with practically the same curriculum, thus giving to all branches of the service a nucleus of men well trained along scientific lines and qualified to take up intelligently any graduate work that may be demanded of them * * *.

If we choose to draw a conclusion from the example of other countries, it is that less mathematics is taught on the average to officers of infantry and cavalry. On the other hand, the strides in science in recent years and the increased application of mathematical investigation in electricity, chemistry, ordnance, and engineering demand a thorough foundation in scientific training for officers of engineers, ordnance, and artillery. This foundation must be laid upon a good and sufficient training in pure mathematics. I find that in range the course in mathematics pursued at our Military Academy by the upper sections compares favorably with theirs, constituting about an average. The French and Italian cadet schools cover more ground, the English, Austrian, and German slightly less. In England and Germany there are, however, courses of pure and applied mathematics for specially selected officers at graduate schools.

The conclusion seems to be that the range covered by the upper course in mathematics at West Point is not too great for the proper training of officers of engineers, ordnance, and artillery; that its value may be enhanced by a more thorough training in the subject of differential equations at the expense, if need be, of some other subject.

Since this Government is disposed to take due pains with the education of its officers, irrespective of branch, and since cadets at our institution do not before admission cover with certainty as much ground as at the preparatory schools of other countries, a *general course* in mathematics should be required of all officers for its practical value, but no less for its educational value in training the mind to logical forms of thought, in developing the sense of absolute truthfulness, together with a confidence in the accomplishment of definite results by definite means. A *special course* in mathematics is, on the other hand, to be regarded as the foundation stone in the training of officers for the scientific corps.

ADMINISTRATION

For the purpose of control and instruction, the personnel of the department of mathematics consists of a professor, an associate professor, an assistant professor, and a number of instructors, varying with the size of the classes under instruction. This staff is composed entirely of officers of the United States Army. The professor is permanently in charge as the executive head of the department. He

has military control over the instructors and students while they are on duty under him; he assigns the instructors to their work, makes out the courses of study, superintends the instruction, and is responsible that approved methods are followed.

His juniors are all younger officers detached by the War Department from the several branches of the service and sent for periods of four years or more to serve on the teaching force of the academy. They are nominated to the War Department by the professor. Their selection is dictated by the fact that they have shown special ability, aptitude, and predilection for mathematics by their undergraduate record; also by the fact that they are believed to possess those other important qualities of the instructor that are essential for the molding of character in the student.

The junior instructors, whenever it is possible, are trained upon the course they are assigned to teach by a series of conferences conducted by the professor or one of the more experienced instructors.

Under normal conditions only one-fourth of the body of instructors is changed annually. This insures continuity in the teaching staff.

An instructor has charge of two sections of about 10 cadets each which recite to him daily (6 days per week).

METHODS. REVIEWS, AND EXAMINATIONS

A certain portion of a standard textbook is assigned in advance for each day's recitation. Upon this theory and upon the exercises applying it the student is expected to spend from three to four hours in preparation. When the section reports to the instructor for recitation, the latter devotes as much of the beginning of the period as he judges best in answering the questions of the student upon the different points of the lesson for the day, solving illustrative problems and volunteering such explanations and elucidations of the subject matter as he may think advisable. An endeavor is made to select textbooks that present the subject matter in sufficient detail to enable an earnest student of normal intelligence by thorough application to comprehend clearly the theory enunciated. It is the purpose to require this thoughtful application which develops the spirit of mental independence and consciousness of power. A lack of proper effort to accomplish his daily task, therefore, is regarded as a military delinquency on the part of the student and is punished as such.

It is the custom, though not an invariable one, to take each subject of study three times.

First, an advance is made, during which the lessons are short and explanations and demonstrations are numerous. The student is expected to ask and to receive assistance from his instructor upon any

difficult point. He is questioned and induced by hints from the instructor to originate questions upon matters that may have failed to suggest themselves to him. On the advance all work of instructor and student is performed upon the blackboard to the benefit of the entire section. It is believed that much profit is derived from seeing the errors of a fellow-student's work corrected and also from observing its excellencies. The sections are composed of pupils of approximately equal ability. Each member is thus encouraged to take an active part in any discussions and receives his full share of the instructor's time and attention.

At regular intervals a review of the advance work is made. The lessons are longer, fewer explanations are necessary, and more applications of theory to the solutions of problems are required of the student. Occasionally an entire period on this partial review is devoted to the solution in writing of the same set of problems by all cadets of the same group.

A second or general review takes place at the close of each subject. This covers the entire course, in long lessons continued over several days. Each day a thorough written test is held upon the portion of the subject assigned for that day. This includes both demonstrations and practical applications. After the completion of the work by the student, solutions are given and explained in full at the blackboard by an instructor and questions relating thereto are answered by him. The student who has qualified upon these written tests is considered proficient on the work of the term without further examination. The one who has not so qualified is given a regular written examination of four to eight hours covering the entire course.

COURSE IN MECHANICS AND ASTRONOMY

The courses in the calculus and in mechanics begin at the same time; the calculus is taught daily from September 1 to November 1, and alternates daily with mechanics from November 1 to March 1; mechanics is taught on alternate days from September 1 to June 1.

The lessons in mechanics in September and October are two-hour periods in the section room, without a preparatory study hour. The principles developed in this part of the course relate to so much of the subject of statics as does not involve the use of the calculus. Simple illustrative experiments are made by the pupils, and the first part of the text is followed in such a way as to bring out the essential points with the least possible loss by misdirected study. The purpose of this part of the course is not only to master the fundamental principles of statics, but also to direct the study so that the pupil shall always use his mathematical knowledge and the language of the text merely as tools with which to shape accurate physical con-

ceptions of the subject. During this preliminary part of the course only such simple definitions as are necessary to the work in hand are required of the students, and the experience gained here is an effective preparation for mastering the more difficult definitions and distinctions in the subject of kinetics.

By November 1 the class has covered enough of the calculus to take up the study of mechanics with mutual advantage to the two courses, and the recitations in mechanics from that date have a study period for preparation, alternating with the calculus.

It is the aim of the course to cover the subject as thoroughly as practicable in a little more than 100 lessons; or, stated in the proportion of the student's entire work for an academic year, about one-fourth.

The subject of statics is carried far enough to include the mechanical powers and a short treatment of the simple principles of graphic statics. The course in rigid kinetics is carried up to as general an explanation of simple gyroscopic motion as may be made by differential equations, without the time integrals; and the year's work is concluded by a short study of fluid equilibrium and flow. Astronomy is carried far enough to secure some facility in handling the sextant, and in solving time, latitude, and longitude problems. This work occupies about 54 days.

The course in ordnance and gunnery requiring previous mathematical training is, in general terms, as follows: Interior ballistics; calculations of the effects of explosion; calculations of the strength of guns of both built-up and wire-wound construction; calculations relating to the construction of the rifling curves of guns; recoil and recoil brakes; exterior ballistics; calculations of the strength of projectiles and the arming resistance of fuses; calculations of the forces brought on the parts of gun carriages by the discharge of the gun; calculations of the stresses in gun carriage parts; calculations relating to gears and gearing; and calculations relating to recoil springs.

II. ENGINEER SCHOOL OF APPLICATION

WASHINGTON BARRACKS, D. C.

OBJECT OF SCHOOL

This school aims to give to the junior officers of the Corps of Engineers a theoretical and practical knowledge in the various departments of engineering required of them in their professional duties as engineers in charge of fortifications, rivers and harbors, lighthouses and aids to navigation, and military engineering in time of peace and war.

ORGANIZATION

The organization of the school is changed from year to year. In 1912 the department of military engineering will be transferred to Fort Leavenworth. The instructors are detailed from the officers of the Corps of Engineers supposed to be specially fitted by their experience in the charge of works pertaining to the department to which they are detailed.

STUDENTS

The student officers are all graduates from West Point and have the benefit of the technical training at that academy; after graduation they are ordered to special designated stations of river and harbor or fortification work, where they are required to observe the operations of the work of construction and submit these as the results of their observations. These being satisfactory, at the end of one year they are ordered to the Engineer School to take up the required course. No examinations are required for entrance, it being assumed that the preparation as outlined above is sufficient.

COURSES OF STUDY.

The courses of study are not definitely fixed, as changes are constantly necessary in order to keep up with the knowledge gained by recent works of construction and operation.

In general the courses are about as follows:

Civil engineering, about 12 weeks; military engineering, about 8 weeks; and electricity, mechanics, and power, about 32 weeks.

STUDY AND APPLICATION OF MATHEMATICS

Pure mathematics is not studied at the Engineer School. The application of the principles of mathematics is required in all departments. A detailed statement of the requirements is shown below.

Roads and pavements.—An elementary knowledge is required of algebra, geometry, trigonometry, analytic geometry; an extensive knowledge is required of descriptive geometry.

Foundations, roofs, and bridges.—These require an extensive knowledge of algebra, geometry, trigonometry, descriptive geometry, analytic geometry, and calculus.

Building construction, heating, and ventilation.—The course in these subjects requires a fair knowledge of geometry and an extensive knowledge of descriptive or practical geometry.

Water supply, sewage disposal, etc.—These courses cover principally the practical application to hydraulics of such mathematical subjects as algebra, geometry, trigonometry, descriptive geometry, analytic geometry, and calculus, of which a fair knowledge is necessary. The practical and descriptive parts of the above courses require no mathematics.

Surveying and practical astronomy.—These are practically studies in mathematics and, particularly in the case of astronomy, require an extensive knowledge of the application of the principles of algebra, geometry, trigonometry, descriptive geometry, analytic geometry, calculus, and least squares.

Harbor improvement, wave action, etc.—The course in these studies is principally a course of reading as to the practical application of the effects of tides, ocean currents, river currents, jetties, etc., in the formation of harbors. In the reading as outlined above frequent mathematical deductions are made, requiring a fair knowledge of algebra, geometry, trigonometry, descriptive geometry, analytic geometry, calculus, and least squares.

Ordnance and gunnery.—The course is principally one of reading, covering the construction of battleships and principles of design; these require an elementary knowledge of algebra, geometry, trigonometry, descriptive geometry, analytic geometry, calculus, and, at times, least squares.

Design of coast fortifications.—This course is supplemented by visits to seacoast fortifications and mine fields at New York, Fort Monroe, or other suitable seacoast defenses. Students are required to design plans for defense of certain portions of the seacoast, showing plans of defense complete and in detail. This course requires an extensive knowledge of geometry, trigonometry, descriptive geometry, and analytic geometry.

Electricity, practical.—This course is very complete, including experiments of all kinds with electricity in its application to motors, dynamos, lights, etc., for use in seacoast defenses, mines, etc. An extensive knowledge is required of algebra, geometry, descriptive geometry, and analytic geometry.

Mechanics.—This is a further study of mechanics and civil engineering as studied at the United States Military Academy. The course is short, but in portions requires a fair knowledge of algebra, geometry, descriptive geometry, trigonometry, analytic geometry, and calculus.

Power, engines, plants, etc.—This course covers only an incomplete knowledge of the principles of operation of the larger classes of engines, but requires a very good knowledge of the smaller ones. Tests are made of the smaller engines; their efficiencies are obtained; the advantages and disadvantages of their application to the works of construction and operation of rivers and harbors and seacoast defense are systematically studied. These studies require an extensive knowledge of the principles of algebra, geometry, trigonometry, descriptive geometry, and analytic geometry.

METHODS OF INSTRUCTION

Instruction is both practical and theoretical. The course for the year is discussed by the instructors in the school at a board meeting at which the commandant of the school presides. The time allotted to each department is here decided upon, and a schedule is submitted by each department to the commandant. Upon his approval, the course of this department is adopted. Certain books are selected for reading by the students, and portions of these books are required; other important books on the subjects are listed, the reading of which is optional.

Lectures are given during the year on the subjects of study. The lecturers are generally officers of the Corps of Engineers who have had experience in the subject under discussion; other engineers of special experience in similar work are secured as lecturers whenever possible. The library of the school is a very good scientific library.

Enough copies of each book are kept to provide each student with such reading matter as is necessary for his use at the time the particular subject is being studied.

EXAMINATIONS

Written examinations are required in certain subjects, principally those covered by courses in reading. Experiments, if successful, are accepted in lieu of examination in certain parts of the experimental courses.

III. ORDNANCE SCHOOL OF APPLICATION

SANDY HOOK PROVING GROUND, N. J.

The object of this school is to impart to those officers of the Army who are detailed to duty in the ordnance department a theoretical and practical knowledge of the science of designing and using ordnance.

METHOD OF OBTAINING STUDENTS

Officers of the Army at large desiring service in the ordnance department are permitted to take, upon application, a competitive examination held annually. The officers selected are detailed to duty in the department and, as a rule, are sent to the school during their first year's service. The majority of the students are graduates of the United States Military Academy and the remainder of other colleges and technical schools throughout the country.

The entrance examination is intended to demonstrate that each successful candidate has a practical working knowledge of arithmetic, algebra, geometry, trigonometry, analytic geometry, descriptive geometry, differential and integral calculus, and mechanics.

COURSE OF STUDY

1. Pure mathematics. Differential equations. Four weeks. Limited courses in elliptic functions, hyperbolic functions, vectors, and determinants are now being prepared.

2. Ordnance engineering, 21 weeks.

3. Chemistry of explosives, gunpowders, oils, and fuels, 8 weeks.

4. Practical and theoretical electricity, 16 weeks.

Nearly all branches of mathematics are required in the solution of problems connected with the design of guns, gun carriages, projectiles, fuses, and other ordnance material; with the determination of the action of powder in guns and of high explosive bursting charges in projectiles, and with the course in alternating current electricity. The solution of the problems involved in the designing of gun carriages requires a more complete mastery of the different

branches of mathematics than any other class of ordnance and perhaps any other class of engineering work.

The course in differential equations embraces: Equations of the first order and first degree, equations of the first order but not of the first degree, singular solutions, linear equations with constant coefficients, linear equations with variable coefficients, ordinary differential equations with more than two variables, and partial differential equations.

METHOD OF INSTRUCTION

Instruction is given by lectures, on which the students take notes. The instruction is limited to the deduction of fundamental principles, generally expressed in equations or formulæ, and to explanations of the practical applications and conditions covered by each problem.

Recitations are not held. The results of each exercise and test are carefully scrutinized and checked, and each principle of which there is an indication of any lack of full understanding is fully explained in a subsequent lecture. During lectures full and free discussion of the principles involved is invited. The discussion among students of their work is encouraged, but the results must be the production of the individual. Stress is laid on the making of calculations correctly. The instructors and students live together in a mess and the latter are under the constant observation of and in contact with the former.

IV. THE COAST ARTILLERY SCHOOL

This school, situated at Fort Monroe, Va., is a school of application, the object of which is to prepare officers and enlisted men of the Coast Artillery Corps for the active duties of their arm of the service; to make research in such branches of science as relate to practical gunnery, submarine mining, and torpedoes in coast defense; to make experiments and to disseminate such knowledge as may be desirable in the interests of the Coast Artillery service.

COURSES OF STUDY

The regular and advanced courses for officers are embraced in two departments, as follows:

I. Department of artillery and gun defense:

Regular course—

1. Artillery proper.
2. Artillery defense.
3. Explosives.

Advanced course—

1. Ballistics.
2. Artillery defense, advanced.
3. Explosives, advanced.

II. Department of electricity and mine defense:

Regular course—

1. Electricity and mine defense.
2. Power.

Advanced course—

1. Electricity and mine defense, advanced.
2. Power, advanced.

The object of the advanced course is to amplify for specially selected officers the instruction and work of the regular course, with a view to improving their qualifications as instructors, fitting them for board and technical work, instructing them in the duties of the general staff of an army, and preparing them for duty at the Army War College.

The courses of instruction comprise practical exercises, problems, research, partial examinations, conferences, and lectures.

The course in exterior and interior ballistics requires advanced mathematical training and is, for the greater part, a graduate course in mathematics. The following topics are taken up in this course:

Exterior ballistics. The principal and secondary problems. Accuracy and theory of errors. The calculation of constants, including the coefficient of form and the drift constant. Classification of trajectories. Deductions of empirical formulas. Perforations. Practical work in setting up, adjusting, and using ballistic machines.

Interior ballistics. Relation of maximum pressure to charges. Mode of combustion of powder and its relation to pressures. Initial pressure on the rifling. Characteristics of a powder. Variations. Recoil.

REPORT OF SUBCOMMITTEE 2

MATHEMATICS IN SCHOOLS FOR THE TRAINING OF NAVAL OFFICERS, INCLUDING SCHOOLS FOR GRADUATES OF ANNAPOLIS

The United States Naval Academy, at Annapolis, Md., is under the supervision of the United States Navy Department and has for its purpose the training of officers of the Navy. The students of the Naval Academy are called "midshipmen." According to the present law two midshipmen are allowed for each Senator, Representative, and Delegate in Congress, and two for the District of Columbia; in addition to these, the President appoints five each year from the United States at large.

ENTRANCE REQUIREMENTS

Candidates are required to pass mental and physical examinations to qualify for entrance. The first mental examination is held on the third Tuesday in April and is conducted by the Civil Service Commission at certain authorized places in each State; the second examination is held only at Annapolis, Md., and is under the direction of the Superintendent of the Naval Academy.¹ Mental examinations are given in the following subjects, and applicants may be rejected if found deficient in any one of them: Punctuation, spelling, English, grammar, geography, general history, United States history, arithmetic, algebra through quadratic equations, and plane geometry.

Candidates passing the mental examinations are examined physically at the Naval Academy by a board composed of three medical officers of the Navy. A candidate must be of good moral character, physically sound, well formed, and of robust constitution; any one of 20 stated physical defects is sufficient to cause his rejection. He must be between 16 and 20 years of age. Candidates passing both the mental and the physical examination are admitted as students to the academy. On admission, each midshipman must sign articles binding him to service in the United States Navy for eight years; unless sooner discharged.

¹ Beginning with the year 1912, both examinations will be conducted by the Civil Service Commission.

COURSE OF INSTRUCTION

The instruction given in the academy extends over a period of four years and includes work in mathematics, mechanics, descriptive geometry, drawing, physics, chemistry, engineering, navigation, ordnance and gunnery, history, English, and modern foreign languages. The following outline indicates only the ground covered in theoretical and applied mathematics during the course:

FIRST YEAR.	
	Periods per week.
First term :	
Mechanical drawing-----	4
Algebra and geometry-----	6
Second term :	
Mechanical drawing and descriptive geometry-----	3
Trigonometry-----	6
SECOND YEAR.	
First term :	
Mechanical drawing-----	3
Analytic geometry and the calculus-----	5
Second term :	
Integral calculus, spherical trigonometry, and stereographic projection..	5
THIRD YEAR.	
First term, theoretical mechanics-----	4
Second term :	
Astronomy and navigation-----	2
Applied mechanics -----	3
FOURTH YEAR.	
First term, theory and practice of navigation-----	5
Second term :	
Theory of compass deviations, surveying, and practical navigation----	4
Engineering mechanics -----	3

DISTRIBUTION OF TIME

The academic year begins October 1 and closes the first week in June. The members of the three undergraduate classes are sent on a cruise each summer for a period of three months. On these cruises the midshipmen are required to perform all the general duties of a navigator, with particular reference to the adjustment and use of the navigational instruments on board, to practical pilotage, and to the determination of the ship's position by observation.

During the academic year each class in mathematics requires a period of two hours for recitation; classes recite in sections of 12 students each.

Midshipmen complete the courses in pure mathematics during the first two years in the academy and the courses in applied mathematics in various other departments during the last two years.

PURPOSE OF TEACHING MATHEMATICS

In the teaching of mathematics at the Naval Academy, as in any technical school, the aim is purely practical, the course consisting essentially of the solution of problems which a midshipman must understand in order to become a naval officer.

All of the textbooks used in the department of mathematics have been written expressly for the midshipmen by men in the department. No more theory is presented in these books than is absolutely necessary. The recitation work, which is strictly competitive, consists of solving numerous problems on the blackboard; and perhaps 90 per cent of all monthly, semiannual, and annual examinations are composed of practical problems.

ADMINISTRATION

Instruction in the Naval Academy is carried on through the following departments: Mathematics and mechanics, navigation, seamanship, physics and chemistry, marine engineering and naval construction, electricity, English and modern languages. Each department is supervised by a naval officer. Teaching is done in some departments by naval officers detailed for such duty and in others by both naval officers and civilian instructors. In the department of mathematics there are 13 instructors, of whom 7 are naval officers, and 6 civilian instructors, having been appointed from civil life.

METHODS, REVIEWS, AND EXAMINATIONS

Accurate marking of work done by the midshipmen during their four years' course at the academy is of the utmost importance, for their marks or credits determine the order of their promotion after graduation; consequently all of their work is strictly competitive, and all possible care is taken, therefore, in assigning lessons, in organizing new sections with different instructors each month, and in marking daily recitations and examination papers, so that any advantage or disadvantage in the methods of instruction may be equally shared by all.

The lessons for each day of the month are assigned by the head of the department at the beginning of the month; these assignments are noted by the instructors and given to the midshipmen at each recitation, so that all midshipmen in the same class study and recite precisely the same work at the same time.

A further effort to give all of the midshipmen an equal opportunity in the recitation room is made by a new arrangement of sections and instructors each month. The 12 midshipmen receiving the highest marks in the monthly examination constitute the first section for the following month; the 12 receiving the next highest,

the second section, and so on.¹ The instructors are assigned different sections from month to month, so that all midshipmen are placed on an equal footing so far as advantages or disadvantages of different sections and different instructors are concerned.

Midshipmen are marked on a basis of 2.5 for passing, or satisfactory, and 4 for perfect. They receive daily marks for their work in the recitation, and the average of the daily marks is taken as the weekly mark; the average of four weekly marks is taken as the monthly recitation mark. An examination is given at the close of each month and the examination mark is combined with the monthly recitation mark, the former counting one-third. For the information of the midshipmen, a sheet is posted giving the final monthly mark and class number or standing of each member of the class. This plan is followed each month during the year except the months of January and May, when the monthly examinations are omitted, because these months immediately precede the semiannual and final examinations. The semiannual examination mark is combined with the average of the monthly marks from October to January, inclusive, to determine the final mark for the first half year; the semiannual examination mark counting one-fourth. Similarly for the second half year the final mark is combined with the average of the monthly marks for the final mark of the second half year, the final mark counting one-fourth. Semiannual and annual sheets similar to the monthly sheets are posted, giving the mark and rank of each member of the class. The monthly examinations are two hours in length, while the semiannual and final examinations are each five hours. All examination papers must be marked independently by two instructors, the mean of the two markings being taken as the mark for the examination. In case there is a considerable difference between the two markings, the paper is re-marked by the head of the department, and the different marks are then properly adjusted. Instead of regular recitations on Saturday morning, the classes of the first and the fourth years have written recitations of two hours each. The mark received on this paper is counted as the recitation mark for that day. Such recitations are not so frequent in the other two classes.

When a midshipman is badly deficient in one study and fails to make a satisfactory mark (2.5) in any other subject for either the first or second half year, he is dropped from the academy; the vacancy of course is not filled until the following year.

The final term average of every midshipman in each branch of study is multiplied by the coefficient assigned that branch for the term, and the sum of the products is the aggregate mark for the

¹ In the upper classes there are usually not more than 8 or 10 midshipmen in each section.

year. Coefficients are assigned to the different branches according to the time devoted to these branches. For mathematics these coefficients are as follows: Algebra and geometry, 3; trigonometry, 3; calculus, 5; applied calculus and stereographic projection, 6; and mechanics, 11.

The merit roll of the graduating class is prepared at the completion of the four years' course; the names of the graduates are arranged in the order of merit according to the graduating mark, which is the arithmetical sum of the final marks of the four years of the course.

After graduation midshipmen are sent to sea for two years, after which they are given the final graduating examination, and if found satisfactory are eligible for promotion to the commissioned rank of ensign.

THE NATURE OF THE COURSES IN MATHEMATICS

The Naval Academy is a strictly technical school, and the courses in mathematics are essentially practical problem courses. More condensed courses in mathematics have been necessitated at the academy during the last two years by the increased time devoted to the professional subjects of marine and electrical engineering. All subjects ordinarily treated in mathematical courses, but which are not adapted to the needs of a naval officer, are omitted, while certain other important features are given greater emphasis.

In the algebra, particular emphasis is placed upon the following: Computation by logarithms, the graph of the general polynomial and its use, the tracing of curves of the first and second degree, the theory of equations, identities, undetermined coefficients, and series. The subject of choice and chance is merely touched upon, while the subjects of harmonic progression, interest and annuities, continued fractions, theory of numbers, and determinants are omitted. Special free-hand methods are used for tracing curves of the second degree by means of limiting tangents, diameters, and asymptotes.

The work in trigonometry emphasizes particularly accurate logarithmic work in the solution of plane and spherical triangles—the oblique spherical triangles being solved by means of a perpendicular and Napier's rules. The text includes a course in stereographic projections covering as a special feature the projection and solution of the astronomical triangle.

Except for its subsequent use in the calculus, analytic geometry occupies a very small place in the academy compared with that usually assigned it in colleges and universities. The tracing of curves of the third or higher degrees by use of the analytical triangle may be mentioned as a special feature.

The calculus is a rather thorough practical course, emphasizing particularly the following topics: Length and area of curves, surfaces, volumes, center of gravity, center of pressure, and moments of inertia.

USE OF MATHEMATICS IN OTHER STUDIES

Studies requiring mathematical knowledge for their pursuit and the kind of mathematics required for each are as follows: Ordnance and gunnery—trigonometry, calculus, and mechanics; navigation—trigonometry; marine engineering and naval construction—trigonometry and calculus; and electrical engineering—algebra, trigonometry, and calculus.

OPPORTUNITIES FOR FURTHER STUDY

The more important schools attended by certain graduates of the Naval Academy are the School of Marine Engineering, established at the Naval Academy for young officers pursuing graduate courses in this field of study, and the Massachusetts Institute of Technology, for those who are to become naval constructors. Only graduates of the Naval Academy are permitted to take the entire course in the latter institution. The course at the Massachusetts Institute of Technology is one of three years in length and leads to the degree of master of science. In arranging this course the objects sought are the addition to the training already obtained at the Naval Academy of those subjects which are peculiar to naval architecture, and such an extension and rounding out of that training as will best enable a naval constructor to meet the varied and exacting demands of his official position. The course includes theoretical naval architecture, marine engineering, steam and electrical engineering, steam turbines, warship design, sanitation, metallurgy, and metallography. In mathematics all students are required to take advanced calculus, differential equations, and the method of least squares; this is supplemented by courses in applied mechanics, including the strength of materials, graphic statics, and the theory of elasticity.



UNITED STATES BUREAU OF EDUCATION
BULLETIN, 1912: NO. 3 WHOLE NUMBER 471

REPORT OF THE COMMITTEE ON UNIFORM RECORDS AND REPORTS

ADOPTED BY THE DEPARTMENT OF SUPERIN-
TENDENCE OF THE NATIONAL EDUCATION
ASSOCIATION : : : : FEBRUARY 29, 1912

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LETTER OF TRANSMITTAL.

DEPARTMENT OF THE INTERIOR,
BUREAU OF EDUCATION,
Washington, February 3, 1912.

SIR: The best interests of education demand that there should be adequate and uniform methods and forms of collecting and recording statistics of schools of all kinds in all the States, cities, and rural districts of the Union. The work of collecting, compiling, and interpreting statistics in the Bureau of Education would be greatly helped by this. This bureau, therefore, welcomes the interest in this work which has developed in recent years among school officers throughout the country and which has caused the department of superintendence of the National Education Association to appoint a committee on uniform records and reports. The Commissioner of Education and the Chief of the Division of School Administration of the bureau have cooperated with this committee at its request, and the bureau has lent it all possible aid and assistance. The report of this committee on uniform records and reports contains many recommendations and suggestions regarding forms and the method of using them, which will be of great benefit to the schools in all parts of the country. I therefore recommend that it be published as a bulletin of the Bureau of Education.

Very respectfully,

P. P. CLAXTON,
Commissioner.

The SECRETARY OF THE INTERIOR.

REPORT OF THE COMMITTEE ON UNIFORM RECORDS AND REPORTS.

To the Department of Superintendence of the National Education Association:

Your committee on uniform records and reports has, since the last meeting of the department, continued its work along the lines indicated in the preliminary report submitted at that meeting. That progress has been made is indicated by statistics which were gathered by the United States Bureau of Education showing that 216 cities are now using the cumulative record card, and that 418 cities are able to report their fiscal statistics on the form which was recommended by this committee in cooperation with the United States Bureau of Education, the Census Office, and the Association of School Accounting Officers. We believe that the work which has been begun by our committee should be continued by a permanent committee whose duty it should be to suggest from time to time such improvements in records and reports as may be determined by their study of the situation.

The report which follows is divided into the following sections: (1) Records and reports for State school systems; (2) records and reports for city school systems; (3) pupil records with special reference to the cumulative record card; and (4) the report of fiscal statistics. Accompanying this discussion there are presented as separate documents, the cumulative record card recommended by the committee; the form for reporting fiscal statistics, which was prepared in conference with the Bureau of Education, the Census Office, and the Association of School Accounting Officers, and which is now furnished to cities by the Bureau of Education; and the form for a teacher's register.

STATE REPORTS.

In dealing with that section of its work which relates to State accounting and reports the committee appreciates fully that the legislation of the various States has a most important bearing on the practicability of uniformity in matters of detail. On some points this legislation has to do with matters of fundamental concern to the States, and modification of it is extremely unlikely. Such for example are statutes dealing with the distribution of State school funds. Such funds are secured in a considerable variety of ways, and this distribution is arranged on various bases satisfactory to the legislatures

of the different States. While there will doubtless be an increasing recognition of the basic principles that should govern such distribution and this recognition will lead to a certain degree of uniformity in the bases of distribution selected, it is hardly conceivable that local considerations will not continue to govern largely such plans. Recognizing this and other differences, it is clear that the statistics of the States must in a considerable measure conform to definitions, terms, and methods that comply with local statutes and conditions.

The committee does not regard it as essential to the purposes of this report to deal, beyond this explanatory reference, with these necessary points of difference. The following recommendations it hopes will prove a constructive contribution to the part that may be taken by the State departments in securing reasonable uniformity in reporting and in attaining a more efficient publicity through official reports.

The forms to be employed by States in gathering statistics should be similar in general form and arrangement to those used by the National Bureau.—The committee recognizes that an important step toward uniformity in reporting will be to present to the various reporting officers of the country statistical forms as nearly as practicable, uniform in terms, definitions, and arrangement.

If it could be made possible for the local officer to report both to the State and to the National bureau on practically the same basis, distinct gains both in accuracy and in uniformity would accrue.

The committee recognizes the great desirability of an arrangement whereby the statistics of the Bureau of Education as relating to units within the several States might be gathered through the various State departments of education. Such a plan would obviate the necessity of a second reporting by local officers, while it would doubtless increase the means at the disposal of the Bureau of Education for securing statistics from the local units. This plan of reporting to the Bureau of Education through the State offices the committee recommends for adoption as early as practicable. It sees no reason why it may not be adopted by those States that are in position to make such cooperative arrangements, even though all State departments may not be able to make them at once.

In the meantime it repeats the recommendation of its preliminary report, to the effect that State departments in securing statistics from units within the States conform so far as possible to the forms employed by the Bureau of Education, supplementing the points covered therein with those required for local use. These forms, it will be noted, may be issued both in the "long" and the "short" forms for use, respectively, with larger municipalities and with smaller school systems. These forms, issued by the Bureau of Education and approved in conference with this committee, are submitted herewith and made a part of this report.

Essential points not now reported by all the States should by agreement come under universal reporting.—A careful inspection both of National and State reports shows that there are various fundamental points of information relative to schools that are reported by a majority of the States but are not reported by all of them. The committee believes that the basis adopted by the Bureau of Education for all leading items is at once conservative and reasonably comprehensive and that it should be adopted by all the States.

In its preliminary report the committee called attention to various items regarded as fundamental by a majority of the States, but not reported by all of them. In order to collect figures on some of these points, as, for example, the school census (not taken by 3 States), enumeration by sex (omitted by 13 States), school enrollment (only partially taken by 12 States), wages of teachers (not returned for the sexes separately), and private schools (not fully reported), it may be necessary to secure additional legislative authority. The fact that so large a majority of the States have found it desirable to secure these statistics is sufficient evidence of their general interest and value.

Educational reports should be made for the year ending June 30.—There appears to be a considerable variety in the terms for which reports are made. The committee recommends that all school systems, including State systems, make their reports on all educational items for the year ending June 30. It does not appear to the committee that such reports for this period are necessarily inconsistent with a plan of making financial reports for a fiscal year terminating on another date.

The scope of the State report should be coextensive with all educational interests of the State.—The committee believes that the educational report of each State should bear the same relation, but more in detail, to the State and its educational activities that the National report bears to the entire country.

A review of State school reports reveals a wide variety of practice in the scope of investigation conducted by State departments. Some of these reports cover only the essential points of public-school conduct required by law to be returned to the State offices, while others aim to report with reasonable fullness all the educational activities of the State.

With regard to the content of State reports the committee commends to the favorable consideration of State officers the proposition that each State report shall be a compendium of all the educational activities of the State for which it is made. As a supplement to this proposition, the committee mentions the following suggestive outline:

1. A review of educational progress of other States, with particular bearing upon forward movements within the State.

2. Detailed statistics of all public schools under local management—*a*, elementary; *b*, secondary; *c*, normal; *d*, collegiate; *e*, city institutional; *f*, for special pupils; *g*, vocational; *h*, extensional.

3. Summaries of the foregoing.

4. Public schools under direct State management—*a*, elementary; *b*, secondary; *c*, normal; *d*, collegiate; *e*, technical or vocational; *f*, professional; *g*, schools for delinquents; *h*, schools for defectives; *i*, special.

5. Summaries of the foregoing.

6. Schools under private management—*a*, elementary; *b*, secondary; *c*, collegiate; *d*, vocational; *e*, professional; *f*, schools for delinquents; *g*, schools for defectives; *h*, special.

7. Summaries of the foregoing.

8. Special investigations—

(*a*) Investigations dealing with special problems, such as school mortality, nonpromotion, etc., are most efficiently conducted through local school systems. The fruits of such investigations should, however, through the medium of the State report be made available to all the people of the State.

(*b*) State-wide investigations dealing with forward movements affecting a large number of communities, such as school consolidation, conveyance, secondary school distribution, rural progress, etc., should be made directly by State offices.

Special reports or bulletins should be issued at intervals.—The committee strongly recommends the issuing by the States of bulletins or special reports dealing with particular issues at times separate from that of the publication of the comprehensive State report. Such separate reports may be made timely to the discussion of these special issues and hence may be made more effective in promoting a public understanding of them.

The use of charts, diagrams, and illustrations should be considerably increased.—The committee recommends that the State reports, in common with city reports, make larger use of charts, diagrams, and illustrations for the purpose of presenting with greater force matters of special and timely interest. While these are in the nature of devices and as such are rarely applicable to the same set of statistics each year, yet they undoubtedly make an appeal to the interest of any subject that a verbal or tabular statement fails to effect, with a resultant better understanding of it.

Comparative tables should be arranged covering intervals of several years and certain phases of school activity should be reported for longer periods.—The committee believes that both State and city reports should make comparative tables showing statistics covering intervals of 5 or 10 years. Such tables should appear on many items

that are annually reported. The work of gathering statistics would, however, be considerably simplified if statistics on various phases of educational progress should be gathered at decennial periods, and the committee is of the opinion that the purpose for which these statistics are gathered would be fully met by such occasional reporting. The United States Bureau of Education should become the source of suggestions as to what information shall be collected for other than annual periods.

Interpretation of statistics is necessary.—As in the case of city reports, the State report must discharge as fully as possible its chief function as an agent of publicity. The merely formal presentation of figures or tables is only a step toward publicity. The reporting officer should bring his school experience and his larger outlook over the educational field to the aid of the public through an adequate interpretation of the statistics presented. Such interpretations should in part be made in the reports themselves, closely connected with tables and their summaries. They will have particular value, however, when presented at opportune times through special bulletins, exhibits, and the public press. The committee recommends a largely increased attention to that phase of educational reporting that aims to make statistics intelligible to the largest possible constituency.

SUMMARY OF RECOMMENDATIONS RELATING TO STATE REPORTS.

A. That the State departments adopt forms for receiving statistics from the units within the States similar, as far as practicable, in arrangement to those used by the Bureau of Education.

B. That all the State departments in gathering information adopt as a basis the items accepted by the practice of a majority of States and of the Bureau of Education.

C. That educational statistics be reported for the year ending June 30.

D. That each State report be made the clearing house of information of all educational institutions and activities within the State.

E. That the State report give publicity to any local investigations whose findings would have general interest and that it include the findings of State-wide investigations covering matters of State-wide application.

F. That special bulletins or reports be issued at opportune times.

G. That tables be arranged to show comparisons covering a range of years and that certain phases of educational activity be reported at decennial or other periods.

H. That larger attention be paid to the interpretation of statistics.

CITY SCHOOL REPORTS.

The need for the gathering of data showing actual conditions in the schools is obvious. If the school is to be scientifically managed, and its effectiveness definitely measured by fixed tests, eliminating mere personal bias and unsupported opinion, facts must be collected and employed as a guide to administration.

For convenience, an outline showing the organization of the school system, together with the date of introduction of various kinds of activities, such as evening schools, summer schools, manual training, etc., should constitute part of a school report. The following outline suggests merely one form in which this may be expressed:

OUTLINE FORM OF CITY SCHOOL REPORT.

Outline of school system.....	1. Normal school (organized 18—).	
	2. High school.....	(a) Academic high schools (first organized 18—). (b) Technical high school (opened Oct., 19—). (c) High school of commerce (opened Oct., 19—).
	3. Elementary school.	(a) Regular elementary schools (organized 18—). (b) Special elementary schools. (1) Boys' school (opened 18—). (2) School for deaf (established 18—). (3) Schools of individual instruction (defectives) (opened 18—). (4) Backward schools (organized 19—). (5) School for cripples (opened 19—). (6) School for blind (opened 19—). (7) Elementary industrial school (organized 19—).
	4. Kindergarten (opened —).	
	5. Evening school....	(a) Evening elementary schools (opened 18—). (b) Evening high schools (opened 19—).
	6. Summer school....	(a) Summer high school (opened 19—). (b) Summer grammar schools (opened 19—). (c) Summer primary schools (opened 18—). (d) Summer manual training school (opened 19—). (e) Summer boys' school (opened 19—). (f) Summer kindergartens (opened 19—). (g) Summer playgrounds (opened 19—). Etc., etc.

TEACHERS' SALARY TABLE.

Obviously, the question of salaries is important. For purposes of comparison, it is desirable to gather data showing the number of teachers at the various salary units indicated in the following table:

Number of elementary-school teachers with salaries—		Number of high-school teachers with salaries—	
Below \$350.		Below \$500.	
\$350 to \$400.		500 to 600.	
400 to 450.		600 to 700.	
450 to 500.		700 to 800.	
500 to 550.		800 to 900.	
550 to 600.		900 to 1,000.	
600 to 650.		1,000 to 1,100.	
650 to 700.		1,100 to 1,200.	
700 to 750.		1,200 to 1,300.	
750 to 800.		1,300 to 1,400.	
800 to 850.		1,400 to 1,500.	
850 to 900.		1,500 to 1,600.	
900 to 950.		1,600 to 1,700.	
950 to 1,000.		1,700 to 1,800.	
1,000 to 1,050.		1,800 to 1,900.	
1,050 to 1,100.		1,900 to 2,000.	
1,100 to 1,150.		2,000 and above.	
1,150 to 1,200.			
1,200 and above.			

The following form of table is used to show the per cent of teachers for the various periods of service:

Per cent of elementary teachers for the period—	Per cent.
Under 5 years.	
5 to 9 years.	
10 to 14 years.	
15 to 19 years.	
20 to 24 years.	
25 to 29 years.	
30 years and above.	

Per cent of high-school teachers for the period—	Per cent.
Under 5 years.	
5 to 9 years.	
10 to 14 years.	
15 to 19 years.	
20 to 24 years.	
25 to 29 years.	
30 years and above.	

UNITS OF COST.

Increasing interest centers in cost. It is important that the per capita cost of instruction, on the one hand, and of equipment and supplies, on the other, should be shown not only city wide, but also per building. The per capita cost for each subject in the high school, for example, chemistry, physics, manual training, etc., should be shown for each building, and also city wide. Moreover, for purposes of comparison, these tables of cost should cover a period of 5 or even 10 years. Not only does economy in educational supplies and educa-

tional equipment follow such exhibit of tables of cost, but it leads to unification and standardization of educational equipment in the various buildings in a school district. Tables similar to the following will be found helpful:

Per Capita Cost of Instruction.

TABLE I.—*Showing cost of instruction in the regular day elementary schools, for the years 1903–1912, the enrollment, the per capita cost of instruction, the increase and the per cent of increase in per capita cost of each year over the preceding, also the per cent of increase in per capita cost since 1903.*

Years.	Cost of in- struction in regular day ele- mentary schools.	Enrollment in regular day ele- mentary schools, or average daily at- tendance, or both.	Per capita cost of in- struction in regular day ele- mentary school.	Increase in per capita cost over preceding year.	Per cent of increase in per capita cost over preceding year.	Per cent of increase in per capita cost since 1903.
1902-3.....						
1903-4.....						
1904-5.....						
1905-6.....						
1906-7.....						
1907-8.....						
1908-9.....						
1909-10.....						
1910-11.....						
1911-12.....						

TABLE II.—Showing cost of instruction—that is, amount paid for salaries of supervisors, principals, and teachers in all schools and in each type of school for the years 1908-1912, the per cent of total spent on each type of school, and the per cent of increase since 1908.—Continued.

[illegible]

TABLE III.—Showing cost of instruction, enrollment, and per capita cost of instruction in each type of school in the city of _____, for the year _____.

	Cost of in- struction.	Enrollment or average daily at- tendance.	Per capita cost of in- struction.
Normal.....			
High schools.....			
Academic high school.....			
Technical high school.....			
High school of commerce.....			
Elementary schools.....			
Regular elementary.....			
Special elementary.....			
Backward school.....			
School for blind.....			
Boys' school.....			
School for cripples.....			
School for deaf.....			
Elementary industrial.....			
Special schools.....			
Kindergarten.....			
Evening schools.....			
Evening high schools.....			
Evening elementary schools.....			
Summer schools.....			
Summer high schools.....			
Summer elementary schools.....			
Grammar school.....			
Primary school.....			
Manual training school.....			
Boys' school.....			
Kindergarten.....			
Playgrounds.....			

The following table is a type by which may be shown various statistical items of interest and value covering a period of years:

TABLE IV.—Showing enrollment in the regular day elementary school, for the years 1903-12, the number of teachers in the regular day elementary school, number of pupils per teacher, the decrease in number pupils per teacher over preceding year, and the per cent of decrease in number of pupils per teacher since 1903.

	Enrollment regular day elementary school. ¹	Teachers in regular day elementary school.	Pupils per teacher in regular day elementary school.	Decrease over preceding year in number pu- pils per teacher in regular day elementary school.	Per cent of de- crease in num- ber pupils per teacher since 1903.
1902-3.....					
1903-4.....					
1904-5.....					
1905-6.....					
1906-7.....					
1907-8.....					
1908-9.....					
1909-10.....					
1910-11.....					
1911-12.....					

¹ Exclusive of transfers and the enrollment of all special schools.

TABLE V.—*Showing the enrollment in the regular day elementary schools for the years 1903–1912, the number of regular teachers in the regular day elementary schools, the average number pupils per regular teacher, the decrease in number of pupils over the preceding year, also the per cent of decrease in number of pupils per regular teacher since 1903.*

	Enrollment regular day elementary schools.	Number regular teachers regular day elementary schools.	Number pupils per regular teacher regular day elementary schools.	Decrease in number pupils per regular teacher.	Per cent of decrease in number pupils per regular teacher since 1903.
1902-3.....
1903-4.....
1904-5.....
1905-6.....
1906-7.....
1907-8.....
1908-9.....
1909-10.....
1910-11.....
1911-12.....

TABLE VI.—*Showing enrollment in Latin, English, algebra, etc., the number dropping out and failing in each high-school class.*

	Number enrolled in the study.	Number dropping study.	Number remaining.	Failures of number remaining to end of year.	Total failing and drop- ping study.	Per cent of failures of those re- maining to end of year.	Per cent of total fail- ures and dropping study.
I. Latin.....
II. Latin.....
III. Latin.....
IV. Latin.....
I. English.....
II. English.....
III. English.....
IV. English.....
Algebra.....
Etc.....

ANNUAL REPORT OF THE SUPERINTENDENT OF SCHOOLS.

Every report should contain a table of contents, showing not only the general headings treated in the report, but also the subheads. Such reports should also contain a carefully prepared index. These two items make usable the school report and are important factors in its make-up.

Every annual report of a city superintendent should also contain tables showing enrollment, distribution of enrollment, withdrawals, distribution of withdrawals, nonpromotions, distribution of nonpromotions, etc. Information upon which these figures may be compiled should be gathered on forms similar to those which are named immediately below by title and which are printed on the pages following with the exception of all but one of those forms which pertain to high schools. As the high-school forms are similar in all essential respects to those for the elementary schools, it has not seemed necessary to print them. These same forms may also be used in the superintendent's annual report for the presentation of statistics upon these same points.

ELEMENTARY SCHOOLS.**Principal's Term Report.**

- A. Enrollment, promotions, nonpromotions, by grades.
- B. Distribution of enrollment by ages and grades.
- C. Distribution of withdrawals by ages and causes.
- D. Distribution of attendance.
- E. Graduates by years in schools.
- F. Nonpromotions by grades and causes.
- G. Failures, by studies and grades.
- H. Distribution of leavings and withdrawals by ages and grades.
- I. Ages of graduates.
- J. Enrollment and attendance.
- K. Distribution of whole-time teachers.

Teacher's Term Report.

- L. Enrollment by divisions.
- M. Nonpromotions by grades and causes.
- N. Failures by studies and grades.
- O. Enrollment and attendance.
- P. Distribution of enrollment by ages.
- Q. Distribution of withdrawals by ages and causes.
- R. Distribution of leavings by ages.
- S. Beginners by training.
- T. Beginners by ages.

HIGH SCHOOLS.**Principal's Term Report.**

- AA. Enrollment and attendance.
- BB. Distribution of enrollment by ages and classes.
- CC. Source of new pupils.
- DD. Ages of new pupils.
- EE. Distribution of leavings and withdrawals by ages and classes.
- FF. Ages of graduates.
- GG. Distribution of enrollment, number leaving, withdrawals, by classes and terms.
- HH. Distribution of enrollment, number leaving, withdrawals, by courses and classes.
- II. Distribution of withdrawals by classes, ages, causes.
- JJ. Graduates by year in school.
- KK. Distribution of teachers.
- LL. Enrollment in studies and failures in each.

Teacher's Term Report.

- MM. Enrollment and attendance.
- NN. Distribution of enrollment by ages and classes.
- OO. Source of new pupils.
- PP. Ages of new pupils.
- QQ. Distribution of enrollment, number leaving, withdrawals, by classes and terms.
- RR. Distribution of enrollment, number leaving, withdrawals, by courses and classes.
- SS. Distribution of withdrawals.
- TT. Distribution of leavings and withdrawals, by ages and classes.
- UU. Age of graduates.
- VV. Graduates by years in school.

REPORT ON UNIFORM RECORDS AND REPORTS.

PUBLIC ELEMENTARY SCHOOLS.

REPORT OF THE _____ SCHOOL, FOR THE TERM ENDING _____,
191—.

ENROLLMENT, PROMOTIONS, NONPROMOTIONS, BY GRADES.

All per cents will be figured at office of superintendent.

	First Grade.												Total all grades.			
	Divisions.									Total.						
	C.			B.			A.			Boys.	Girls.	Total.				
	B.	G.	T.	B.	G.	T.	B.	G.	T.							
Enrollment for term.....													(Same form for grades second to eighth.)			
In division first time.....																
Previously in division.....																
Leaving.....																
Withdrawals.....																
Enrollment at date this report.....																
Per cent enrollment at date on enrollment for term.....																
Promotions: One division only.....																
Per cent on enrollment at date.....																
Per cent on enrollment for term.....																
Promotions: Two divisions.....																
Per cent on enrollment at date.....																
Per cent on enrollment for term.....																
Nonpromotions.....																
From in division first time.....																
From previously in division.....																
Per cent nonpromotions on enrollment at date.....																
Per cent nonpromotions on enrollment for term.....																

DISTRIBUTION OF ENROLLMENT AT DATE OF THIS REPORT, BY AGES AND GRADES.¹

Ages.	Grades.											
	First.			Second.			Third.			Fourth.		
	Boys.	Girls.	Total.	Boys.	Girls.	Total.	Boys.	Girls.	Total.	Boys.	Girls.	Total.
6 years.....												
7 years.....												
8 years.....												
9 years.....												
10 years.....												
11 years.....												
12 years.....												
13 years.....												
14 years.....												
15 years.....												
16 years.....												
17 years.....												
18 years.....												
19 years.....												
20 years.....												
Total by grades.....												
Below normal age.....												
Normal age.....												
Above normal age.....												

¹ Give age September 1.

DISTRIBUTION OF WITHDRAWALS, BY AGES AND CAUSES.

[illegible]

DISTRIBUTION OF ATTENDANCE.

Time.	Boys.	Girls.	Total.	Per cent of whole number.
Attending entire term.....				
Attending at least—				
80 days.....				
70 days.....				
60 days.....				
50 days.....				
40 days.....				
30 days.....				
20 days.....				
10 days.....				
Attending less than 10 days.....				
Total (equal enrollment for term).....				

GRADUATES, BY YEARS IN SCHOOLS.¹

	Boys.	Girls.	Total.
Taking six years.....			
Six and one-third.....			
Six and two-thirds.....			
Taking seven years.....			
Seven and one-third.....			
Seven and two-thirds.....			
Taking eight years.....			
Eight and one-third.....			
Eight and two-thirds.....			
Taking nine years.....			
Nine and one-third.....			
Nine and two-thirds.....			
Taking ten years.....			
Total.....			

¹ Counting three terms as a school year. Data from promotion record card.

NONPROMOTIONS, BY GRADES AND CAUSES.

		Irregular attend- ance.	Physical defects.	Personal illness.	Incapac- ity (men- tal).	Indiffer- ence.
FIRST GRADE. ¹						
C.....	Boys.....	.....	.....	.....	.....	.....
	Girls.....	.....	.....	.....	.....	.....
	Total.....	.....	.....	.....	.....	.....
B.....	Boys.....	.....	.....	.....	.....	.....
	Girls.....	.....	.....	.....	.....	.....
	Total.....	.....	.....	.....	.....	.....
A.....	Boys.....	.....	.....	.....	.....	.....
	Girls.....	.....	.....	.....	.....	.....
	Total.....	.....	.....	.....	.....	.....
Total.....		Boys.....	.....	.....	.....	.....
		Girls.....	.....	.....	.....	.....
		Total.....	.....	.....	.....	.....
* SECOND GRADE.						
C.....	Boys.....	.....	.....	.....	.....	.....
	Girls.....	.....	.....	.....	.....	.....
	Total.....	.....	.....	.....	.....	.....
B.....	Boys.....	.....	.....	.....	.....	.....
	Girls.....	.....	.....	.....	.....	.....
	Total.....	.....	.....	.....	.....	.....
A.....	Boys.....	.....	.....	.....	.....	.....
	Girls.....	.....	.....	.....	.....	.....
	Total.....	.....	.....	.....	.....	.....
Total.....		Boys.....	.....	.....	.....	.....
		Girls.....	.....	.....	.....	.....
		Total.....	.....	.....	.....	.....
THIRD GRADE.						
C.....	Boys.....	.....	.....	.....	.....	.....
	Girls.....	.....	.....	.....	.....	.....
	Total.....	.....	.....	.....	.....	.....
B.....	Boys.....	.....	.....	.....	.....	.....
	Girls.....	.....	.....	.....	.....	.....
	Total.....	.....	.....	.....	.....	.....
A.....	Boys.....	.....	.....	.....	.....	.....
	Girls.....	.....	.....	.....	.....	.....
	Total.....	.....	.....	.....	.....	.....
Total.....		Boys.....	.....	.....	.....	.....
		Girls.....	.....	.....	.....	.....
		Total.....	.....	.....	.....	.....
Grand total.....		Boys.....	.....	.....	.....	.....
		Girls.....	.....	.....	.....	.....
		Total.....	.....	.....	.....	.....
Per cent of total due each cause.....		.....	.....	.....	.....	.....

¹ Same form used for grades fourth to eighth.

FAILURES, BY STUDIES AND GRADES.

		Reading.	Spelling.	Lan- guage.	Gram- mar.	Arith- metic.	History.	Geog- raphy.
FIRST GRADE. ¹								
C.....	Boys..	.....	.....	.....	.....	.....	.....	.....
	Girls..	.....	.....	.....	.....	.....	.....	.....
	Total..	.....	.....	.....	.....	.....	.....	.....
B.....	Boys..	.....	.....	.....	.....	.....	.....	.....
	Girls..	.....	.....	.....	.....	.....	.....	.....
	Total..	.....	.....	.....	.....	.....	.....	.....
A.....	Boys..	.....	.....	.....	.....	.....	.....	.....
	Girls..	.....	.....	.....	.....	.....	.....	.....
	Total..	.....	.....	.....	.....	.....	.....	.....
Total.....	Boys..	.....	.....	.....	.....	.....	.....	.....
	Girls..	.....	.....	.....	.....	.....	.....	.....
	Total..	.....	.....	.....	.....	.....	.....	.....
SECOND GRADE.								
C.....	Boys..	.....	.....	.....	.....	.....	.....	.....
	Girls..	.....	.....	.....	.....	.....	.....	.....
	Total..	.....	.....	.....	.....	.....	.....	.....
B.....	Boys..	.....	.....	.....	.....	.....	.....	.....
	Girls..	.....	.....	.....	.....	.....	.....	.....
	Total..	.....	.....	.....	.....	.....	.....	.....
A.....	Boys..	.....	.....	.....	.....	.....	.....	.....
	Girls..	.....	.....	.....	.....	.....	.....	.....
	Total..	.....	.....	.....	.....	.....	.....	.....
Total.....	Boys..	.....	.....	.....	.....	.....	.....	.....
	Girls..	.....	.....	.....	.....	.....	.....	.....
	Total..	.....	.....	.....	.....	.....	.....	.....
THIRD GRADE.								
C.....	Boys..	.....	.....	.....	.....	.....	.....	.....
	Girls..	.....	.....	.....	.....	.....	.....	.....
	Total..	.....	.....	.....	.....	.....	.....	.....
B.....	Boys..	.....	.....	.....	.....	.....	.....	.....
	Girls..	.....	.....	.....	.....	.....	.....	.....
	Total..	.....	.....	.....	.....	.....	.....	.....
A.....	Boys..	.....	.....	.....	.....	.....	.....	.....
	Girls..	.....	.....	.....	.....	.....	.....	.....
	Total..	.....	.....	.....	.....	.....	.....	.....
Total.....	Boys..	.....	.....	.....	.....	.....	.....	.....
	Girls..	.....	.....	.....	.....	.....	.....	.....
	Total..	.....	.....	.....	.....	.....	.....	.....
Grand total.....	Boys..	.....	.....	.....	.....	.....	.....	.....
	Girls..	.....	.....	.....	.....	.....	.....	.....
	Total..	.....	.....	.....	.....	.....	.....	.....
Per cent failures on enrollment for term.....		.....	.....	.....	.....	.....	.....	.....

¹ Same form used for grades fourth to eighth.

DISTRIBUTION OF LEAVINGS AND WITHDRAWALS, BY AGES AND GRADES.¹

Ages.	Grades.											
	First.			Second.			Third.			Fourth.		
	Boys.	Girls.	Total.	Boys.	Girls.	Total.	Boys.	Girls.	Total.	Boys.	Girls.	Total.
6 years												
7 years												
8 years												
9 years												
10 years												
11 years												
12 years												
13 years												
14 years												
15 years												
16 years												
17 years												
18 years												
19 years												
20 years												
Total by grades												
Below normal age												
Normal age												
Above normal age												

¹ Give age September 1.

AGES OF GRADUATES.¹

	11	12	13	14	15	16	17	18	Total.
Boys.....									
Girls.....									
Total.....									

¹ Give age at last birthday.

ENROLLMENT AND ATTENDANCE.

	Boys.	Girls.	Total.
Average monthly enrollment.....			
Average daily attendance.....			

PUBLIC ELEMENTARY SCHOOLS.

TEACHER'S TERM REPORT.

..... building. Grade

Term ending.....191 Teacher.

	..... grade.											
	Divisions.									Total.		
	C.			B.			A.			Boys.	Girls.	Total.
	B.	G.	T.	B.	G.	T.	B.	G.	T.			
Enrollment for term.....												
In division first time.....												
Previously in division.....												
Leaving.....												
Withdrawals.....												
Enrollment at date of this report												
Promotions:												
One division only.....												
Two divisions.....												
Nonpromotions.....												
From in division first time.....												
Previously in division.....												

NONPROMOTIONS, BY GRADES AND CAUSES.

		Irregular attend- ance.	Physical defects.	Personal illness.	Incapac- ity (mental).	Indiffer- ence.
..... GRADE.						
C.....	Boys.....					
	Girls.....					
	Total.....					
B.....	Boys.....					
	Girls.....					
	Total.....					
A.....	Boys.....					
	Girls.....					
	Total.....					
Total.....	Boys.....					
	Girls.....					
	Total.....					
Per cent total nonpromotions due each cause.....						

FAILURES, BY STUDIES AND GRADES.

		Read- ing.	Spell- ing.	Lan- guage.	Gram- mar.	Arith- metic.	His- tory.	Geog- raphy.
..... GRADE.								
C.....	Boys.....	.....	.....	.....	.....	.....	.....	.....
	Girls.....	.....	.....	.....	.....	.....	.....	.....
	Total.....	.....	.....	.....	.....	.....	.....	.....
B.....	Boys.....	.....	.....	.....	.....	.....	.....	.....
	Girls.....	.....	.....	.....	.....	.....	.....	.....
	Total.....	.....	.....	.....	.....	.....	.....	.....
A.....	Boys.....	.....	.....	.....	.....	.....	.....	.....
	Girls.....	.....	.....	.....	.....	.....	.....	.....
	Total.....	.....	.....	.....	.....	.....	.....	.....
Total.....	Boys.....	.....	.....	.....	.....	.....	.....	.....
	Girls.....	.....	.....	.....	.....	.....	.....	.....
	Total.....	.....	.....	.....	.....	.....	.....	.....
Per cent failures on enrollment for term.....		.....	.....	.....	.....	.....	.....	.....

Average monthly enrollment.....	.....
Average daily attendance.....	.....

DISTRIBUTION OF ENROLLMENT AT DATE OF THIS REPORT,
BY AGES.¹

	Ages.															
	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Total.
Boys.....																
Girls.....																
Total.....																

¹ This table to be filled in on May report only.

DISTRIBUTION OF WITHDRAWALS, BY AGES AND CAUSES.

Causes.	Ages.																												Total by cause.		
	6		7		8		9		10		11		12		13		14		15		16		17		18		19		Boys.	Girls.	Total.
	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Total.		
Financial condition of home.....																															
Illness in family.....																															
Personal illness.....																															
Physical defects.....																															
Incapacity.....																															
Indifference.....																															
Falling promotion.....																															
Left city and entered no school.....																															
To go to work.....																															
Total by ages.....																															

DISTRIBUTION OF LEAVINGS, BY AGES.

	Ages.															
	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Total
Boys.....																
Girls.....																
Total.....																

BEGINNERS 1 C DIVISION, BY TRAINING.

	Boys.	Girls.	Total.
Total number of beginners.....			
(a) Number having received kindergarten training.....			
(b) Number having received no kindergarten training.....			
Promotions.....			
(a) Number having received kindergarten training.....			
(b) Number having received no kindergarten training.....			
Nonpromotions.....			
(a) Number having received kindergarten training.....			
(b) Number having received no kindergarten training.....			

BEGINNERS 1 C DIVISION, BY AGES.

Ages.	Boys.	Girls.	Total.
5½ up to 6.....			
6 up to 6½.....			
6½ up to 6¾.....			
6¾ up to 7.....			
7 up to 7½.....			
7½ up to 7¾.....			
7¾ up to 8.....			
8 up to 8½.....			
8½ up to 9.....			
9 and above.....			
Total.....			

HIGH SCHOOLS—ENROLLMENT IN STUDIES AND FAILURES IN EACH.

Studies (subjects running more than one year indicated D, C, B, A). ¹	First term. ²											
	Enrollment.			Repeaters.			Dropping.			Rems.		
	B.	G.	T.	B.	G.	T.	B.	G.	T.	B.	C.	
Latin.....												
D. Latin.....												
C. Latin.....												
B. Latin.....												
A. Latin.....												
German.....												
D. German.....												
C. German.....												
B. German.....												
A. German.....												
French.....												
B. French.....												
A. French.....												
Spanish.....												
B. Spanish.....												
A. Spanish.....												
Greek.....												
C. Greek.....												
B. Greek.....												
A. Greek.....												
History.....												
American history and civics.....												
English history.....												
Ancient history.....												
Medieval and modern history.....												
Industrial history.....												
Art history (European).....												
Art history (American).....												
Economics, commercial law, and local industries.....												

¹ Other studies included, but not listed here, are English, mathematics, science, drawing, manual training, industrial activities, commercial activities, physical training, and music.

² The same forms are used for the second and third terms.

GENERAL INFORMATION.

A page devoted to this subject should be included in each city report. The following subheads are recommended—

1. The legal basis:

(a) Independent district or city government; if latter, relation of education department to other departments of the municipal government, especially as to raising of money, erection of buildings, and appointment of members of board of education.

(b) Method of voting and paying bonds.

2. Financial basis:

(a) Limits of taxation and bonded indebtedness for school purposes.

(b) Assessed valuation of independent district or municipality.

(c) What per cent of true valuation is the assessed valuation.

(d) Present tax rates for schools.

(e) Amount of bonded indebtedness for schools.

(f) Amount of local school tax paid by owner of real estate whose true valuation is \$5,000.

(g) Per cent of total school moneys received from State, county, municipality, and school district.

(h) Approximate per cent of school moneys paid by business corporations not owned principally by citizens, as railroads and large industrial, mining, and commercial enterprises.

3. (a) Population of city compared with population of four preceding censuses.

(b) Number engaged in each principal class of occupation—agricultural, professional, domestic and personal, trade and transportation, manufacturing and mechanical, and also number engaged in each of the chief occupations that are represented in the city under each of these classes.

4. School census:

(a) Public school enrollment.

(b) Private school enrollment.

(c) Average daily attendance based on number belonging.

(d) Average daily attendance based on enrollment.

(e) Average daily attendance based on school census.

5. Scope of system—number of different kinds of schools, classes, and activities.

6. Organization of administration—relative authority and duties of superintendent, assistant superintendent, supervisors, principals, teachers.

7. Per cent of teachers appointed from outside the city.

PUPIL RECORDS.

The foundation of all statistics concerning pupils is established in the records made by teachers in the schoolroom. Unless these records are expressed in common terms having a definite meaning the data gathered from them are not comparable. School statistics as at present compiled and compared are unreliable and of little value, and they will continue to be so until agreement can be reached not only as to terms used and the definite meaning of these terms, but also, to some extent, as to the method of recording and arranging the original data upon which school statistics are based.

The first work of the committee on uniform statistics consisted of a careful investigation of the subject of school records, and this resulted in the submission of an elementary school record system, through the cooperation of the United States Commissioner of Education, to school superintendents throughout the country. Although several forms were offered for the purpose of getting criticisms and suggestions and for the sake of illustrating the complete working out of a system of school records, chief emphasis was laid on the cumulative record card which was framed to serve as a permanent and progressive record of the pupil's kindergarten and

After an examination of more than 500 replies to that part of the commissioner's circular relating to a cumulative record card, the committee finds as follows:

1. That there is substantially unanimous assent to the following general proposition:
A cumulative record card should be kept for every child throughout his entire kindergarten and elementary school career.
2. That suggestions made by correspondents have not shown a preponderance of opinion in favor of any specific increase or decrease in either the size or contents of the card.
3. That in view of those conclusions the card submitted has been adopted as best representing the consensus of opinion on the matter of a cumulative record card, and the committee recommends the general use of this card or one in substantial agreement with it as to the essential facts needed for statistical data and school administration.

The committee desires to call attention to the following suggestive list of uses to which the card may be put:

1. Amount of attendance of individual pupil for one year.
2. Comparative rates of progress in schools having seven-year, eight-year, or nine-year elementary courses.
3. Classification of pupils by age and grade. (Note that a standard date for computing ages is established, viz, September 1.)
4. Classification of pupils for enrollment data:
 - (a) Duplicate enrollment in the school.
 - (b) From other public schools in town or city.
 - (c) From other public schools in State.
 - (d) Original enrollment from all other sources.
5. Number of times child has been detained in a grade.
6. Foreign birth as affecting progress.
7. Kindergarten training as affecting progress.
8. Attendance in other schools as affecting progress.
9. Absence as affecting progress.
10. Numerous inquiries having to do with individual school management.

Diverse opinions as to the necessity of certain items on the "admission, discharge, and promotion card," as, for example, item "Conduct," are not necessarily barriers in the way of the uniform use of the form of card recommended; for in any school system such an item may be omitted by direction of the superintendent or left optional with principals. The value of a uniform card lies chiefly in three considerations:

1. Universal adaptability for use in whatever system of schools the pupil may enter.
2. Decreased cost because of printing in large quantities.
3. Establishment of common practices of record making and common terms for the expression of facts valuable for statistical investigation.

It is believed that any general record card recommended for universal adoption should not include a detailed statement of facts needed for an adequate study of individual cases of physically abnormal and retarded children. For such a purpose a special form should be used providing for yearly records of defective eyesight, hearing, condition of teeth, and other physical characteristics, and for records

concerning nutrition, environment, specific cases of illness, special aptitudes, and such other facts as are likely to be desired. The exact form of such a card may well be left for future consideration.

The general cumulative record card and this supplementary card will represent the *minimum* and *maximum* requirements of the individual cumulative record.

The daily register or daily summary should show four groups of admitted pupils as follows:

(a) Pupils previously enrolled during the year, including transfers, *within the school or school district*. (This item is thrown out in computing the number of different pupils enrolled during the year in a given school or district.)

(b) Pupils previously enrolled during the year *in some other school or school district in the town or city*. (This item is thrown out in computing the number of different pupils enrolled during the year in a given town or city.)

(c) Pupils previously enrolled during the year *in other towns or cities in the State*. (This item is thrown out in computing the number of different pupils enrolled during the year in a given State.)

(d) Pupils *not* previously enrolled during the year *in any town or city in the State*. (These are original enrollments included in all reports.)

It is not useful to attempt a classification of discharged pupils into four groups corresponding exactly to the four groups of admitted pupils. The following classification is suggested as a desirable one:

(a) Pupils temporarily discharged, and transferred within the school or school district.

(b) Pupils transferred to any other school, public or private. (Graduates separately.)

(c) Pupils permanently discharged to go to work. (Schooling discontinued before completion of elementary-school course.)

(d) Pupils discharged for other reasons. (A relatively small number whose schooling is discontinued before completion of elementary-school course for accidental reasons.)

More important, at the present time, than forms for recording attendance and enrollment data, is the securing of a common terminology for certain conditions of attendance and enrollment. The following definitions are submitted as representative of the best practice:

1. AGE AND GRADE CLASSIFICATION.—*For this purpose the age on the 1st day of September should be used. This is the age at which, approximately, the pupil enters upon the work of a new grade. There are good reasons for taking it in preference to January 1, the day on which the work of the grade is partially completed, or July 1, the approximate date on which the work of the grade is finished. It is commonly used in school census enumerations, and is conveniently near the time at which a great majority of pupils enter school. If once recorded on the "admission, discharge, and promotion card" it can be made a matter of record for each succeeding year with practically no effort and with little likelihood of error.*

2. NUMBER ENROLLED.—*It is generally understood that this item means the number enrolled exclusive of duplication, in whatever school unit it is reported for. The way in which this number may be ascertained is indicated under "Enrollment data," above.*

3. NUMBER BELONGING.—*As soon as a pupil is known to have left the school without intention to return he ceases at once to belong and he is not thereafter included in the number belonging. If absent under any other circumstances he is carried on the rolls as "belonging," and marked absent for three consecutive days (or until he returns, if his consecutive absence*

is less than three days in duration). He is "temporarily discharged" at the end of three consecutive days of absence, and then ceases to "belong" until he returns to school and is "readmitted."

A period of three days is suggested as the limit of time during which pupils may be counted as "belonging," for the reason that it is believed to represent the common practice in a majority of the States.

N. B.—"Average number belonging" means the same as "average membership." The average number belonging is found by the same process as the average attendance.

4. AVERAGE ATTENDANCE.—The average daily attendance during the school year (which is the average number of pupils actually present each day the schools were in session) may be computed as follows:

(a) For a single school: Add together the number of days each pupil was present during the year or the number of pupils present each day during the year, and divide the sum (which is the "aggregate attendance in days") by the number of such school days.

(b) For a group of schools having the same number of days in the year (as the schools of most cities have): Divide the combined aggregate attendance in days of all the schools by the number of days in the school year.

(c) For a system of schools having different lengths of school year (as, for instance, those of a county): Add together the average attendance of the component schools and groups of the system as ascertained by the foregoing rules. For larger systems, as those of a State, the summing-up process is continued in the same way.

NOTE.—In systems of schools where monthly reports of attendance are called for the general principles of a, b, and c, above, apply to the finding of monthly averages. The sum of the monthly averages of attendance in the schools of most cities, divided by the number of months, is approximately the same as the average attendance for the year found by the methods given above.

5. AVERAGE NUMBER OF DAYS IN THE SCHOOL YEAR.—In a school system having different lengths of school year in its various units (as in c, above), the average number of days in the school year is found by dividing the combined "aggregate attendance in days" of all schools of the system by the "average attendance" as ascertained by the method given in c.

6. DISTRIBUTED ATTENDANCE.—Distributed attendance is the attendance of individual pupils distributed by groups according to the number of days they have attended school during the year.

A record of the number of days attended by each pupil during the year is provided for on the "admission, discharge, and promotion card," and it is believed that such a record, if generally kept, will prove to be of great interest and value in measuring school efficiency.

FISCAL STATISTICS.

In order to determine the cost of any particular part of our system of education, it is necessary not only to have adequate statistics concerning pupils and teachers, but also a report of fiscal statistics differentiated, not only with regard to the purpose for which money is spent, but also with regard to the special types of schools which are found in a given city. The form of report recommended by the committee provides for such differentiation as will enable anyone to make adequate comparisons among the several cities of the United States, and at the same time calls for a system of accounts which will make it possible to discover the cost of particular types of schools within the system itself.

The form which follows was agreed upon by a committee of representatives from the United States Bureau of Education, the Census Office, the Association of School Accounting Officers, and the Committee on Uniform Records and Reports of the Department of Superintendence. This schedule for reporting fiscal statistics is the one now sent out by the United States Bureau of Education. It is as follows:

A. PAYMENTS.

I. EXPENSES (COST OF CONDUCTING SCHOOL SYSTEM).

				Total.	Salaries.	Other objects.		
EXPENSES OF GENERAL CONTROL (OVERHEAD CHARGES).								
1.	Board of education and secretary's office.....							
2.	School elections and school census.....							
3.	Finance offices and accounts.....							
4.	Legal services.....							
5.	Operation and maintenance of office building.....							
6.	Offices in charge of buildings and supplies.....							
7.	Office of superintendent of schools.....							
8.	Enforcement of compulsory education and truancy laws.....							
9.	Other expenses of general control.....							
10.	Total.....							

	Total.	Schools and special activities.							
		Day schools.		Evening schools.		Nor- mal schools.	Schools for the indus- tries.	Special schools.	Spe- cial activ- ities.
		Ele- men- tary, includ- ing kinderg- arten.	Second- ary (high).	Ele- men- tary.	Second ary.				
EXPENSES OF INSTRUCTION.									
11.	Salaries of supervisors of grades and subjects.....								
12.	Other expenses of supervisors..								
13.	Salaries of principals and their clerks.....								
14.	Other expenses of principals...								
15.	Salaries of teachers.....								
16.	Textbooks.....								
17.	Stationery and supplies used in instruction.....								
18.	Other expenses of instruction..								
19.	Total.....								
EXPENSES OF OPERATION OF SCHOOL PLANT.									
20.	Wages of janitors and other employees.....								
21.	Fuel.....								
22.	Water.....								
23.	Light and power.....								
24.	Janitor's supplies.....								
25.	Other expenses of operation of school plant.....								
	Total.....								

A. PAYMENTS—Continued.

III. OTHER PAYMENTS.

53.	Redemption of bonds.....	\$.....
54.	Redemption of short-term loans.....	.....
55.	Payment of warrants and orders of preceding year.....	.....
56.	Payments to sinking funds.....	.....
57.	Payments of interest.....	.....
58.	Miscellaneous payments, including payments to trust funds, textbooks to be sold to pupils, etc.....	.....
59.	Total.....	.....
60.	Balances at close of year at.....	\$.....
61.	Total payments and balances.....	.....

B. RECEIPTS.

REVENUE RECEIPTS.

62.	Subventions and grants from State.....	\$.....
63.	Subventions and grants from county.....	.....
64.	Subventions and grants from other civil divisions.....	.....
65.	Appropriations from city treasury.....	.....
66.	General property taxes.....	.....
67.	Business taxes (licenses, excise taxes, taxes on corporations, taxes on occupations, etc.).....	.....
68.	Poll taxes.....	.....
69.	Fines and penalties.....	.....
70.	Rents and interest.....	.....
71.	Tuition and other fees from patrons.....	.....
72.	Transfers from other districts in payment of tuition.....	.....
73.	All other revenue.....	.....
74.	Total revenue receipts.....	.....

NONREVENUE RECEIPTS.

75.	Loans and bond sales.....	\$.....
76.	Warrants issued and unpaid.....	.....
77.	Sales of real property and proceeds of insurance adjustments.....	.....
78.	Sales of equipment and supplies.....	.....
79.	Refund of payments.....	.....
80.	Other nonrevenue receipts.....	.....
81.	Total nonrevenue receipts.....	.....
82.	Total receipts.....	.....
83.	Balances at beginning of year.....	.....
84.	Total receipts and balances.....	.....

C. VALUE OF SCHOOL PROPERTIES.

Class of buildings.	Total value of sites, buildings, and equipment.	Value of sites and buildings.	Value of equipment.	Interest on value of school plant.
General control.....
Elementary schools.....
Secondary schools.....
Normal schools.....
Schools for the industries.....
Special schools.....

DEFINITIONS OF TERMS USED IN THE SCHEDULE FOR REPORTING THE FISCAL STATISTICS OF CITIES.

HEADINGS.

Total.—Under this heading include the sum of all figures in the columns to the right, these columns to contain no duplicates.

Schools for the industries.—Include only those schools which offer training in specific vocations. Do not include those schools in which instruction in hand training is offered with a general educational aim, as, for example, the prevailing type of manual training high school.

Special schools.—Include schools for blind, deaf, feeble-minded, delinquents, dependents, etc.

Special activities.—Include lectures, playgrounds, social centers, etc.

ITEMS.

School year.—Report data for the school year instead of the fiscal year when they conflict, if this is possible without much additional labor.

Net payments and receipts only to be reported.—The receipts and payments to be reported must in all cases be net, i. e., the receipts must always show the total amounts received from all sources less any amounts received in error and later corrected by refund payments; and the payments must always show the total amounts paid for the different objects less any amounts paid in error and later corrected by refund receipts.

EXPENSES.

Item 6. Offices in charge of buildings and supplies.—Divide this item into two parts when possible, placing upon the first dotted line expenses of "offices in charge of buildings," including those having charge of the construction and maintenance of physical properties, such as superintendent of buildings, school architects, inspector of buildings, superintendent of repairs, and schoolhouse commission. Payments to special employees engaged exclusively on new work should be charged to outlays. Opposite "offices in charge of supplies" upon the second line, report expenses of the offices of superintendent of supplies, business manager, or other officers whose duties are concerned with the purchase and distribution of supplies.

Item 7. Office of superintendent of schools.—Include all payments for salaries and expenses of the superintendent of schools and of those subordinate administrative officers whose duties are largely administrative and who are not primarily supervisors of instruc-

tion, such as assistant superintendent and board of examiners. See Item 11.

Item 8. Enforcement of compulsory-education and truancy laws.—Include salaries and office expenses of truant officers and police officers detailed as truant officers if paid out of school fund. (Payments for expenses of truant and parental schools should not be entered here, but in column headed "Special schools.")

Item 11. Salaries of supervisors of grades and subjects.—Include salaries of assistant superintendents whose duties are mainly connected with the supervision of instruction and of supervisors of special subjects and of grades, including only those who devote half or more than half of their time to supervision. Include also the salaries of clerks of such officers.

In case an employee renders service in more than one kind of school in the same capacity, as that of a supervisor, prorate his salary, clerk hire, and other expenses between the different kinds of schools according to the amount of time devoted by him to each, charging the expense to the same account under each kind of school.

In case an employee performs one function in one kind of school and another function in another kind of school, as that of supervisor in the elementary schools and that of teacher in the secondary schools, charge his salary, clerk hire, and other expenses to the accounts corresponding to the function to which he gives the major portion of his time (if his time is evenly divided, to the higher function, as supervisor) and to the kind of school in which he exercises such function.

Item 13. Salaries of principals.—This item includes supervising principals, principals of groups and districts, and principals of buildings or similar units, including only those persons devoting half or more than half of their time to administration and supervision of instruction.

Item 15. Teachers.—Include all regular, special, and model teachers who devote more than half of their time to instruction.

Item 16. Textbooks.—Include only the payments for free textbooks furnished the pupils. The payments for textbooks purchased to sell to pupils should be reported under Item 58.

Item 17. Supplies.—Supplies are those things which when once used are actually or constructively consumed, including such items as writing paper, drawing paper, blank books, pencils, pens, adhesives, fasteners, carbon paper, rubber stamps, supplies for typewriter, and other mechanical office or school devices; magazines, newspapers, and other printed matter for current use; textbooks (for students, not purchased for library), test tubes, litmus paper, filter paper; polishing and abrading supplies; brooms and scrub brushes; drugs, chemicals, cleansers; laboratory supplies; wearing apparel; food supplies; flags;

recreational supplies, etc. Include also freight and cartage of such items. Supplies used in instruction should be included under Item 17; those used in operation of plant, under Item 24. See also definition of equipment, Item 50.

Item 18. Other expenses of instruction.—These items include other expenses incident to instruction, as rent of halls for graduation exercises, diplomas, etc.

Item 21. Fuel.—Include also freight, cartage, and weighing charges.

Item 24. Janitor's supplies.—See Item 17.

Item 27. Repair of buildings and upkeep of grounds.—Include payments for labor and materials incident to the repair of buildings, including painting, glazing, and of plumbing, lighting, heating, and ventilation equipment, and all payments for labor and materials incident to keeping the grounds in normal condition.

Item 28. Repairs and replacement of equipment.—For definition of equipment see Items 50 and 51.

Items 32, 33, and 34. Library expenses.—Payments for these expenses should be distributed according to the kind of school. Payments by school authorities for the maintenance of libraries used principally by the general public and not exclusively by the schools should be reported under "special activities."

Items 35 and 36. Promotion of health.—Report all payments for general promotion of health and distribute them among the various kinds of schools and educational activities as far as possible. Among the expenses that should be distributed to the different kinds of schools and special activities are "supervisors of physical training," "care and upkeep of playgrounds," etc. Payments for offices of directors and other overhead charges should be reported on the margin or on separate sheet under proper heads, as "clinic," etc.

Items 40 and 42. Payments to private schools and institutions.—Report all payments by the school system to private schools and institutions for the care and instruction of children in schools and institutions other than those belonging to the school system. These payments should be distributed as called for by the wording of the two lines, according to the kind of school or institution in which the children are kept; if in a day school or night school they should be given in the columns for such schools; while if in an institution furnishing board and clothing they should be placed in the column for special schools.

Item 44. Rent.—Charges for rent of offices used by the general administration should be reported under Item 8.

Items 47-51. Outlays.—Under "Outlays" report all payments for lands, new buildings, new equipment, additions to buildings, or extensive alterations that materially change and improve the buildings, classifying these payments as called for by these items. Include

with payments for land all costs of acquiring title, original grading, and improvements to the grounds, artesian wells, etc. Include with payments for new buildings, architects' fees, advertising for contracts, payments on contracts for construction, installation of plumbing, lighting, heating, and ventilation equipment, etc.

All reports of payments for new equipment for general administration offices and all reports of payments for the acquisition, construction, or equipment of new buildings for the general administration should be reported in a column marked "Administration" on the margin or on an extra sheet.

Items 50-51. Equipment.—All things other than buildings, fences, and similar structures which are adapted to continuous use for increasing the efficiency or economy of human effort, including motors, power-operated machinery and accessories, hand tools, clocks, pianos, window shades, laboratory apparatus, furniture and furnishings, desks, globes, maps, charts, and typewriters, blackboards, except when included in contract for new building, wagons, harness, and other things used in transportation, fire-fighting apparatus, including hose, extinguishers, etc. (For convenience lighting, plumbing, heating, and ventilating equipment are considered as part of the building.)

Item 58. Miscellaneous payments.—Include also any excess of the amount paid for supplies purchased for a storeroom over the amount issued on requisition, and expenses for school lunch rooms carried on by school funds.

RECEIPTS.

Items 62-64. Subventions and grants.—Include all subventions and grants whether obtained from income from State funds, from leases of school lands, from appropriations, or from general property, business or poll taxes, or from fines and penalties.

Item 65. Appropriations from city treasury.—School systems that are administered as departments of the city government will report after Item 65 the aggregate appropriations from the city treasury for the use of school systems less any amounts that are derived from specific sources and are used exclusively for specific school purposes. These generally include amounts that for independent school districts would be reported after Inquiries 62, 63, 64, 71, 72, and in some cases 66. All amounts deducted as above directed from the aggregate appropriations should be reported on these lines as in the case of independent school districts.

Item 78. Sales of equipment and supplies.—Include receipts from sale of textbooks and supplies to pupils; also any excess of the amount of supplies issued on requisition from a storeroom over the amount paid for supplies; also receipts from lunch rooms carried on by school funds, from admission to public entertainments, etc.

DEFINITIONS OF FISCAL ITEMS IN THE SCHEDULE FOR STATE SYSTEMS
AND IN THE ABRIDGED FISCAL SCHEDULE FOR CITIES.

The definitions of the items in the standard fiscal schedule for cities apply to the same items in the standard schedule for State systems and in the abridged city schedule, but many of the items in the last two are combinations of one or more items in the first schedule. A table is given below showing how this combination has been made. In order to ascertain the kinds of expenses that should be charged to any item in either of the last two schedules the definitions of all the items in the standard schedule which were combined in order to make the item should be consulted. Thus, to determine the expenses to be charged to Item 10 in the abridged schedule for cities, the definition for Items 22, 23, 24, and 25 in the standard schedule must be followed, as is indicated in the following table. Similarly, the expenses to be charged to 28b in the State schedule are given in definitions of Items 21 to 25, inclusive.

Table showing manner of "telescoping" items of standard fiscal schedule into items of other schedules.

State schedule.	Abridged city schedule.	Standard city schedule.
26a	1	<div>{1 2 3 4 5 6}</div>
<div>26b} 26c}</div>	2	<div>{7 8}</div>
27a	<div>{3 4}</div>	<div>{11 12 13 14}</div>
27b	5	15
27c	<div>{6 7}</div>	<div>16 {17 18}</div>
28a	8	20

Table showing manner of "telescoping" items of standard fiscal schedule into items of other schedules—Continued.

State schedule.	Abridged city schedule.	Standard city schedule.
28b	<div><div>9</div><div>10</div></div>	<div>21</div> <div><div>22</div><div>23</div><div>24</div><div>25</div></div>
29	11	<div><div>27</div><div>28</div><div>29</div><div>30</div></div>
30a	12	<div><div>32</div><div>33</div><div>34</div></div>
30b	13	<div><div>35</div><div>36</div></div>
30c	14	<div><div>37</div><div>38</div></div>
31	15	<div><div>40</div><div>41</div><div>42</div><div>43</div><div>44</div><div>45</div></div>
32	17	<div><div>47</div><div>48</div><div>49</div></div>
33	18	<div><div>50</div><div>51</div></div>
34	21	<div><div>53</div><div>54</div><div>55</div><div>56</div></div>
35	20	57
	22	58
	25	62
	26	63
	27	64
	28	65

Table showing manner of "telescoping" items of standard fiscal schedule into items of other schedules—Continued.

State schedule.	Abridged city schedule.	Standard city schedule.
	29	66
	30	67
	31	68
	32	69
	33	70
	34	71
	35	72
	36	73
	38	{ 75 76
	39	{ 77 78
	40	{ 79 80

Progress in the field of school records and reports will be made possible by the cooperation of superintendents throughout the United States with the Bureau of Education and with the committee of this department, should such a committee be permanently appointed. The discussion of this committee and the forms which are submitted herewith have the advantage of having been formulated after a careful study of records and reports which are at present in use in our various school systems. That they may be improved upon is fully realized by those who have contributed to the discussion and investigation which has led to the formulation of this report.

PAYSON SMITH, *Chairman.*

GEORGE DRAYTON STRAYER, *Secretary.*

WILLIAM H. ELSON.

E. C. WARRINER.

CHARLES M. LAMPREY.



UNITED STATES BUREAU OF EDUCATION

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MATHEMATICS IN THE
TECHNICAL SECONDARY SCHOOLS
IN THE UNITED STATES

INTERNATIONAL COMMISSION ON THE TEACHING
OF MATHEMATICS

THE AMERICAN REPORT

COMMITTEE No. VI

WASHINGTON
GOVERNMENT PRINTING OFFICE
1912

INTERNATIONAL COMMISSION ON THE TEACHING OF MATHEMATICS.

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THE AMERICAN REPORT.

Committee No. VI. Mathematics in the Technical Secondary Schools in the United States.

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[The report of this subcommittee is incorporated in the general report.]

Subcommittee 2. Public and Private Commercial Schools.

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Dr. TAIT BUTLER, Farm Gazette, Starkville, Miss.

Supplementary Report. The Industrial School of Secondary and Intermediate Grade.

NATHAN N. DICKLER, Manual Training High School, Brooklyn, N. Y.

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MATHEMATICS IN THE TECHNICAL SECONDARY SCHOOLS IN THE UNITED STATES.

PART I.

INTRODUCTORY.

The secondary technical schools of the United States, because of their heterogeneity, present peculiar difficulties to an investigation along the lines laid down by the International Commission. While such schools have existed for many years, it is particularly within the last decade that a great increase in their numbers has taken place, for it is within that period that the tendency to break away from the traditions of the general secondary schools and to bring the schools into close contact with industrial and commercial life, rather than to raise to a maximum their efficiency in furnishing preparation for higher education, has become a movement of sufficient strength to alter essentially the character of existing schools and to determine that of those newly established.

The "manual training high school" is the oldest of the important types of public secondary technical schools in the country. As a type, moreover, it is the most conservative of the schools to be considered in this report, in that to a large extent the traditions of the general secondary school have been retained and the function of the school as an instrument of preparation for higher education emphasized. The ideals of this type of school are essentially scientific rather than classical or technical.

At the other extreme stands the "trades school," a type which is in its infancy as a public institution but examples of which have existed for many years as private or endowed institutions. Here the aim is primarily that of training for immediate entrance into a definite trade or trades and for efficiency in the work thereof. The school is not, or is not primarily at least, an intermediate step in the student's progress toward higher education.

These types represent the extremes. It must, however, be remembered that the lines of demarcation are by no means sharply drawn and that rigid classification is, at the present time at least, scarcely possible.

The schools just mentioned are in the province of subcommittee 1. The schools considered by subcommittee 2 fall into three classes—high schools of commerce, commercial departments of general secondary schools, and private commercial schools (the so-called “business colleges”). On these schools, too, though to a less extent, the influence of the traditions of the general secondary school is in evidence at one end of the series, while at the other end the ideal of the trades school, i. e., training for immediate business activity, is dominant.

The secondary agricultural schools studied by subcommittee 3 are of recent origin. More than schools of the other two classes they are supported in whole or in part by State rather than by municipal appropriations, and consequently are to a greater extent under State supervision. Their object is to provide such an education for the youth of the agricultural community as will tend to retain him in that community as an efficient member thereof. In consequence, except in so far as they lead to the agricultural colleges, their tendency is toward producing immediate vocational efficiency rather than to serve as a step toward higher education.

In view of this diversity it may well be asked what there is in common among these schools that justifies their inclusion in the same category. The obvious answer is that the schools in question are the most recent result of that movement which has led to the establishment of the technical colleges and the broadening of the curricula of the classical colleges and secondary schools, namely, the movement toward bringing the instruction within the school into closer contact with the phenomena and problems of life outside the school, and toward making the knowledge gained in the school more immediately useful to the pupil when he leaves.

AIM OF THE MATHEMATICAL INSTRUCTION.

With the wide differences in general object which exist in the technical secondary schools are naturally associated similar differences in the aim of the mathematical instruction therein.

The schools show in different degrees the common tendency to emphasize the utilitarian side of the subject. Large, well-organized schools which form an integral part of a municipal school system or are controlled by university authorities, while recognizing the utilitarian side and providing for it by suitable selection of problems and correlation with the work of the technical departments, also emphasize the logical element of the subject and the importance of mathematics as an independent science.

There are schools in which, if the character of the text used is any indication, the formal element is predominant; and on the other

hand, as in the trades schools and the private commercial schools, the aim is mainly to produce accuracy and speed in the application of a limited range of mathematical principles to the problems of a definite trade or occupation.

The situation may be illustrated by the following quotations from information furnished by various schools:

(1) The ends to be attained are the knowledge of a body of geometrical truths to be used in the discovery of new truths, the power to draw correct inferences from given premises, the power to use algebraic processes as a means of finding results in practical problems, and the awakening of interest in the science of mathematics.

(2) In mathematics two ends are constantly kept in view: First, stimulation of the inventive faculty, exercise of judgment, development of logical reasoning, and the habit of concise statement; second, the association of the branches of pure mathematics with each other and with applied science, that the pupil may see clearly the true relations of principles and things.

(3) It is the aim * * * to give that knowledge and training to the students that shall make them capable men, ready to meet successfully the practical questions of everyday life, and to solve intelligently the problems constantly arising in office, factory, and field; hence, the practical side of mathematics is emphasized rather than the purely theoretical. Abstract mathematical discussions, as such, are avoided except as they are necessary to a better comprehension of results, and then they are made as direct and clear as possible.

Stress is placed upon the application to mechanical, physical, and electrical problems, but it is intended that the instruction shall be of such a character as to give the student power and incentive to perform ordinary mathematical work with confidence, precision, and success.

(4) In the courses in mathematics the main purpose is to train the students, not to prove propositions and formulæ, but to make intelligent use of these propositions and formulæ in the solution of original problems.

(5) They must know enough of mathematics, drawing, and science to insure intelligent, progressive workmanship, as contrasted with rule of thumb methods.

(6) We aim to give them some idea of the subject of elementary mathematics with special reference to its application in technical studies.

(7) The aim of the courses is twofold: First, to teach the methods of computation necessary for the solution of common problems arising in shop practice; second, to present in condensed form the essentials of algebra, geometry, and trigonometry for the benefit of those who have not had a high-school training, and to show the applications of these subjects to the more advanced types of shop problems.

(8) The practical results of the method are usually the acquisition of certain "rules of thumb" which are immediately available in the trade work of the student. There is probably no very great increase in mathematical ability.

(9) The course in mathematics is designed:

First, to develop in the pupil the power of independent thought, to cultivate the inventive faculty, and to inculcate the habit of clear, concise, logical statement. To this end the course is so arranged that the graphic, concrete branches of the subject precede those that are abstract and analytic.

Second, to teach the student the importance of mathematics in relation to the applied sciences, the mechanic arts, and to business life. For this purpose he is required to apply the formulas of algebra and trigonometry to physics, mechanics, chemistry, and engineering; and the short methods of arithmetic and mensuration to the practical work of bookkeeping and architecture.

The course in mathematics as taught in this school is both preparatory and complete. Those boys who finish their studies here possess a good working knowledge of the subject; and those who continue their studies in colleges or in technical schools possess an adequate preparation for higher work.

(10) The aim of the instruction is to inculcate habits of accuracy, rapidity, and neatness in the manipulation of algebraic operations, and to inspire a thorough knowledge of the fundamental principles and laws of the subject. To aid in securing these results the pupils are required to solve a large number of carefully selected problems.

During the first half of the sophomore year algebra is again taken up. A thorough review of such portions of the elementary algebra as are deemed necessary by the instructor is followed by a course in advanced algebra. This course covers topics usually studied in the freshman year in the colleges and higher technical schools.

Five recitations a week during the second half of the sophomore year and the first half of the junior year are devoted to plane and solid geometry. The instruction aims primarily to use the subject as an instrument of education. Geometry contains a system of knowledge that is indispensable to success in many of the pursuits of life, but the presentation of this system of knowledge can never be other than a secondary object in a course of proper instruction in the subject. In reality the pupil ordinarily comes to the subject with many of its leading facts already in his possession. The real objects kept constantly in view in teaching the subjects are training in logical reasoning, an object of increased importance, as it is the only course in strict reasoning with which a large number of young people ever become closely acquainted; training in clear and accurate expression, an object not wisely neglected in any department of instruction; training in imagination and invention. To aid in these objects, extensive practice in original exercises is given, in which the pupil is required to devise his own proof, under the guidance and suggestions of the instructor.

The last half of the junior year is given to plane and analytical trigonometry. The textbook is supplemented by frequent familiar talks pointing out the best methods of procedure and illustrating the applications of the subject to surveying, navigation, etc. Special stress is placed upon the use of logarithms in computations and also upon analytical work to insure familiarity on the part of the pupil with the transformations and definitions necessary to success in future mathematical and engineering courses.

The schools considered are "secondary" schools, whatever their specific name, and consequently the aim of their instruction, except in the case of the private commercial schools and certain trades schools, is to a greater or less degree influenced by the requirements for admission to higher institutions. In fact, this element is an important consideration in all of the activities of these schools, though of course it is not necessarily predominant.

The mathematical curricula include arithmetic, commercial arithmetic, algebra, geometry, trigonometry, analytic geometry, the calculus, history of mathematics, and so-called "applied" or "shop" mathematics.

In schools where curricula are arranged with more or less reference to the entrance requirements of the colleges, algebra, geometry, and trigonometry receive about the same amount of time as in general secondary schools, viz, one year each of elementary algebra and plane geometry, and one-half year each of advanced algebra, solid geometry, and trigonometry. A year's work ordinarily represents five exercises per week for 33 to 40 weeks, i. e., a total of 165 to 200 exercises. The length of the exercises is from 40 to 50 minutes.

The data accessible render a precise statement of the division of time between the two algebraic subjects and between the two geometric subjects impracticable. The more advanced subjects are occasionally omitted, and in this case the tendency appears to be toward the retention of solid geometry and trigonometry rather than advanced algebra.

The schools to which the above statements apply are ordinarily, though not necessarily, of the type known as "manual-training" schools, as distinguished from the "technical," "industrial," or "trades" schools.

These latter schools, as well as some of the manual-training schools, prefer to offer a course in arithmetic of from 50 to 200 exercises.

A few schools present courses in so-called "shop mathematics," the nature of which appears from the following outline taken from the circular of a trades school:

COURSE I, ELEMENTARY.—SHOP ARITHMETIC.

This course comprises work with common and decimal fractions, measurements, percentage, ratio and proportion, square and cube root; applying these principles to such shop problems as gearing—simple and compound; how to select gears to cut screws and spirals; computations on the lever, including the lathe indicator, lever safety valve, the Prony brake; pulleys and hoists; simple, compound, and differential indexing with the milling machine; problems connected with the speed lathe and engine lathe; computing the horsepower of steam engines, electric dynamos, and motors.

COURSE II, ADVANCED.—ALGEBRA, GEOMETRY, AND TRIGONOMETRY, WITH APPLICATIONS TO SHOPWORK.

This course is open to those who have completed Course I or who have had a preparation equivalent to a good grammar-school education. It treats of the most important principles of *algebra*, especially of the equation as a means of solving problems and of the derivation and use of formulas. The practical side of *geometry* is next taken, emphasizing the methods of finding areas and volumes, weights of bars of various shapes and materials, heating surface of boilers, etc. The last half of this course is spent on *trigonometry*, including the use of logarithms and logarithmic tables and emphasizing the applications of trigonometry to the more advanced types of shop problems.

The private commercial schools give no mathematics but arithmetic and commercial arithmetic; the commercial departments of several secondary schools give commercial arithmetic and sometimes algebra and geometry; while the "high schools of commerce" always give

commercial arithmetic and a course in algebra and offer geometry and trigonometry as elective subjects.

The agricultural schools generally give one-half to one year's work in arithmetic, usually with reference to the problems of farm life, e. g., farm accounts, mensuration, bookkeeping, etc. They ordinarily give the same amount of time to algebra and geometry as do other secondary schools. Advanced algebra is occasionally given, trigonometry in about 25 per cent of the schools, frequently with reference to its use in surveying.

Analytic geometry and the calculus are seldom given except in schools which properly belong in the province of Committee IX in that their work, while not leading to a degree, nevertheless covers the first two years of the work of the higher technical schools. Except for these schools, the subjects mentioned are offered only in courses preparatory to the colleges.

The history of mathematics is specifically mentioned by only one school (and that a school for girls) and is given in connection with the regular work in algebra and geometry.

As to the matter of correlation of the mathematical subjects among themselves or with other subjects, it would appear that it is necessary to distinguish between the actual state of affairs and the tendencies at work. Taking the schools as a whole, it may fairly be said that *systematic* correlation is not widespread. The principle of correlation, however, is generally regarded with favor, but as a rule it is not systematically applied, except where the relation of the subjects (e. g., commercial arithmetic and bookkeeping) is so obvious that the necessity is apparent. In so far as the term "correlation" indicates use of problems taken from the applied sciences or from daily life, there is fairly general application of the principle, but in the sense of systematic coadaptation of mathematical and other courses it is not generally applied.

The situation may be illustrated by the following quotations:

(1) On the technical side the pupil articulates the mathematics with the work of the drafting room, shop, domestic science, and domestic art. Teachers of technical subjects are in constant touch with the mathematics department, anticipating problems which will arise and reporting immediately to that department any weakness shown by a pupil in problem or principle.

(2) In this work a great deal of time will be spent in laboratory study, so that the pupil will obtain such a first-hand knowledge of the subject that he can afterwards readily and efficiently apply it in the shops and laboratories. No sharp distinction will be drawn between algebra, geometry, etc., but the different methods will be treated merely as various ways of getting at the same thing, of which one way may be the more useful in one case and another method that best adapted to deal with another situation. At all times the work in mathematics will be kept in close touch with the shopwork; the aim will be to so train the pupil that he can use his mathematics in the shop readily and efficiently.

These statements are made by schools which strongly emphasize the principle of correlation. Both are recently organized schools.

On the other hand, we have in answer to the question, "Are any systematic attempts made to correlate mathematics with other subjects?" the following:

(3) Some, but more later.

(4) In past, 25 cents on the dollar; will aim to do better in future.

In many cases the answer was a flat "No."

The chairman of the committee is of the opinion, based on internal contradictions in the evidence submitted by the schools, that no satisfactory conclusion as to the nature and results of the application of the principle of correlation can be obtained except on the basis of a study of a considerable number of schools, this study to be made by a single individual or a small committee and on the spot.

EXAMINATIONS.

There is no evidence to indicate that examinations are to any extent used as the sole means of determining the proficiency of the pupil. They are used as auxiliaries for that purpose, but the results are combined with those of daily work. They are ordinarily written, may be from 40 minutes to 4 hours in length, and occur from 30 to 2 times per year. The tendency is toward relatively frequent examinations, not exceeding 2 hours in length.

METHODS OF TEACHING.

The movement which has led to the establishment of the secondary technical schools finds its principal expression in the emphasis laid on the concrete. Consequently one should expect to find, and does find, that increasing attention is paid to the concrete element of the instruction, both in material and method. Nothing, however, could be further from the truth than an assertion that *as a class* those schools have developed and are using methods of instruction widely different from those of general secondary schools. Certain schools, it is true, have developed such methods; the majority have not.

The information derived from the questionnaires is not extensive or detailed enough to warrant detailed statements. The basis of the above assertions lies rather in the direct and indirect evidence contained in the catalogues of the schools.

As illustrations of such evidence the following statements are quoted:

(1) Pupils in mathematics are given acquaintance with the language of mathematical symbols, called formulæ, in which problems and laws involving weight, size, time, force, and the like are frequently stated. They are taught to understand these formulæ, to solve problems so stated, and to use the

mathematical symbols in the statement and solution of new problems. Pupils are taught also to state and solve problems by graphical methods, i. e., by scale drawing or by the *graph*, and immediately to solve the same by the algebraic methods of the equation or the proportion. The pupil becomes familiar with the standard geometrical forms, the laws of their structure, measurement, and relation to other forms, and acquires the power to state these laws algebraically, together with some ability to make a clear and logical proof of the truth of geometrical theorems. Geometry and algebra are carried along together for two years and a part of the third. In the first year the geometrical laws and concepts furnish much material for developing algebraic problems and processes. In the second year algebra is used to develop geometrical theorems, and to fix them in mind through use. The school offers a continuous four years' course of elementary and advanced algebra, plane and solid geometry, and plane trigonometry.

In the classroom a combination of laboratory, recitation, and examination methods is employed. The theory of a new subject, especially in the earlier years, is usually developed by the instructor; and home work is assigned to clarify and impress it, and to enlarge its application. The method of approach to new subject matter is, in general, that of induction, the particular leading to the general, the concrete to the abstract. Deductive work becomes more prominent in the late years.

(2) Throughout the entire course this study (mathematics) will be pursued as a means to quantitative determination in the workshop, laboratory, office, and countingroom. Much of the educational value lies in the grasp which is given the students of quantitative relations.

Objective work will introduce new subjects, so that there may be a rational basis for intelligent use of symbols and a thorough conception of the power of the equation. Formulæ should be deduced from relations actually seen, so that the pupil may discriminate between the abstract formula and its concrete practical relations to real things.

The boys of our school will have several weeks of constructional geometry work at the beginning of their mechanical drawing. This helps to lay a good foundation for demonstrative geometry, as well as to be of great practical value in their future use of drawing.

Supplementary exercises are given to show some of the uses of algebra in the natural sciences. Correlation between algebra, geometry, and the sciences is shown wherever possible. The graph and some of its uses are taught in linear equations and in easy quadratic equations.

In geometry the pupil will to a considerable extent originate his demonstrations instead of simply *memorizing* those of the author. Model proofs will be given when necessary to teach good form and logical arguments, but as a rule such demonstrations will be given only when the pupils would otherwise be at a loss to know how to proceed.

When a class in trigonometry has developed the working formulas it does most of its problem work in the field with the transit, leveling rod, and tape-line. Much of the work is plotted to scale. This work is found to be interesting and practical.

FIRST YEAR.

First term. Algebra to simple equations, including the application of factoring in simplifying fractions, and in solving easy quadratic equations of one unknown quantity.

Second term. Algebra to ratio, including easy exercises taken from the physical and chemical laboratories. The simpler uses of the graph will be taught during this term.

SECOND YEAR.

First term. The first two books of plane geometry. Special attention will be given as to what constitutes a rigid proof. Suggestions are given on methods of attacking propositions and problems. Neat, accurate form work will receive special attention, and pupils will be required to bisect lines, angles, erect perpendiculars, and draw parallel lines by *actually using compasses and ruler*.

Second term. Plane geometry completed. We expect most pupils by this time to be able to do considerable work on their own initiative; to be able to have some determination to master a proposition set before them.

The practical applications of the subject are shown whenever possible to do so.

THIRD YEAR.

First term. Solid geometry.

Second term. Elementary algebra completed. This includes ratio, proportion, variation, imaginaries, series, partial treatment of binomial theorem, logarithms, review.

FOURTH YEAR.

First term. (1) Plane trigonometry. Development of formulas. Fieldwork with transit, leveling rod, and taping.

(2) Higher algebra.

Second term. (1) Descriptive astronomy. A brief, simple, and accurate account of the heavens as they are known to-day. It is intended only for high-school pupils, and to give some information on the subject that is needed for the person of ordinary culture. Interesting facts will be studied, but no attempt can be made to gain any clear conception of the processes by which the fundamental truths of astronomy have been established. The methods of discovering the wonderful truths of this subject belong to the advanced student.

(2) Higher arithmetic for those who expect to become teachers.

NOTE.—The formation of these classes depends on the number of pupils who can arrange their programs so that it would justify the taking of a teacher's time from the crowded classes in first, second, and third years.

These quotations indicate what is done in certain schools which have paid much attention to the development of methods.

On the other hand, there are two sources of evidence for the statement that the schools *as a class* have not developed special methods of instruction. The one is the negative answer in the answers to the questionnaire; the other is in the lists of textbooks. The use of texts dominates the instruction in the majority of American schools, and hence the nature of the text is to some extent an index of the character of the teaching. When one finds, as is actually the case, a widespread use of a few texts in which the treatment is essentially abstract and the problems constructed with small reference to other than formal requirements, it is a justifiable inference in the absence of evidence to the contrary that the instruction in the schools using these texts is not markedly different from that in general secondary schools using the same texts, and this inference is strengthened by detailed statements of matter covered, which not infrequently are extracts from the tables of contents of these texts.

While the use of texts, and, indeed, of traditional texts, is general, the newer schools, especially those in which the industrial idea is

prominent, are to some extent breaking away from these texts and the corresponding instructional methods. A number of schools have prepared collections of problems taken from shop practice or from matter contained in technical periodical literature. Unfortunately but few of these are accessible in published form.

As to the process of instruction, it would appear that the method of holding recitations upon assigned textbook matter is not extinct. This method, which renders the recitation merely an oral examination, is, however, giving place to the method of development of new matter by questioning on the basis of the pupil's fund of knowledge. The use of problems as an instruction to new matters of theory is apparently more common than the use of problems solely as applications of a didactically presented theory.

It must be said, however, that the evidence on this point is meager and conflicting.

It must be borne in mind, moreover, that even approximate uniformity of method does not exist. The nature of the school, the necessity of preparing students for external examinations, the preparation and personality of the teacher—all have their influence on the method of instruction.

The laboratory method of instruction can not be said to be widely used. The term may be taken as denoting the use of experimental processes devised for the purpose of discovery or emphasis of mathematical truths. The mathematics is the final goal, the physical process the means. The method may be illustrated by the following quotation:

Algebraic problems are developed from the laws of percentage from the sides, angles, and areas of polygons. The laws of the lever and of beams are established by experiments in the classroom and are made the basis for the development of the fundamental processes and the laws of sight. Drawing to scale gives many problems in similarity of triangles and in ratio and proportion.

Allied to the laboratory method, but distinct from it, is that which may be termed the "shop method." Here as in the former physical processes are used, but the physical result is the final goal, the mathematical truth, a thing which is introduced and developed because it becomes necessary to the accomplishment of that end. The method may be illustrated by the following quotation:

WORKSHOP MATHEMATICS.

After a thorough review, which demonstrates to the pupil and the instructor the ability of the former for this important branch of his trade, the apprentice is led, by the solution of practical problems, through the necessary portions of arithmetic, algebra, geometry, and trigonometry. These subjects, when presented to pupils in the abstract, are frequently beyond their mental grasp, but when connected with their trade practice the absolute necessity of this knowledge becomes plain; the student then attacks the problem from a new standpoint and with renewed vigor, and succeeds in mastering the difficulties.

All the problems in this branch of apprenticeship, also, are specially prepared by the instructors and printed by neostyle. Much of this work is required to be done by the students as home study. Lectures and shop talks supplement the workshop mathematics.

It is, of course, scarcely necessary to add that the distinction between the two methods, as they are actually used, is not absolute. It is a difference in the position of the center of gravity of the instruction, which, if great, may amount to a qualitative distinction.

Some of the more distinctively vocational schools and all the commercial schools emphasize to a greater extent than the others the matter of computation, for the evident reason that with them the numerical result is a matter of technical importance.

In the commercial school particularly unremitting drill on the elementary processes of arithmetic is an essential feature of the instruction. Naturally the proportion of time expended on such drill depends on the breadth of the curriculum, and is greatest in the private commercial schools, where the only mathematical subject, commercial arithmetic, is essentially a technical subject. In the "high schools of commerce" the drill is important, but the broader curriculum permits emphasis on the theoretical side of the subject. Naturally, in all the commercial schools much attention is paid to the use of material drawn from commercial practice.

PREPARATION OF CANDIDATES FOR TEACHING.

In the greater number of schools a considerable proportion of the teachers are graduates of "normal schools," or schools of college grade. In many instances they are graduates of engineering schools, and, in a few cases, they possess the doctor's degree (obtained in course). In the trades and industrial schools some of the teachers have had experience in a trade or in one of the engineering professions; in the commercial schools many of the teachers have had experience in business houses.

The question of the preparation of teachers is the gravest which these schools have to face, particularly those in which the trades or industrial element is predominant. "Normal" courses for teachers of "manual training" exist, but there appears to be as yet little provision for the training of men who, with an adequate knowledge of the technique and problems of a trade, also possess a thorough knowledge of the science of mathematics and of the theory and practice of education. Such men exist, but they are few in number and are the result of accidental circumstances, not of organized instruction. A few institutions, notably Teachers College, Columbia University, are now offering courses designed to meet the needs of persons preparing to teach mathematics in the secondary technical schools.

PART II.

MODERN IDEAS CONCERNING SCHOOL ORGANIZATION.

The manual training, the industrial, the trades, the agricultural schools, and the high schools of commerce are, in their present form, essentially new types of school which have been developed as the result of the movement to render instruction more concrete and immediately available.

COEDUCATION.

The schools considered by this committee are fortunate in that the vexed question of coeducation presents itself in so objective a manner as to permit sane discussion, in some respects at least. The question of the simultaneous attendance of the two sexes at the same institution is one which may be regarded as settled in America by custom. This question need not concern us here.

On the other hand, in proportion as the schools are distinctively vocational, the question of segregation rather than coeducation becomes important. Segregation becomes imperative when the vocational element is predominant and differs for the two sexes. Whenever in the schools considered, correlation of the mathematical instruction with that in the technical subjects is regarded as essential, the difference between the technical interests of the two sexes is found to be so great that the successful application of the principle of correlation renders segregation necessary.

On the other hand, in the commercial and agricultural schools the interests of the two sexes are so nearly identical that segregation in the classes in mathematics is neither imperative nor usual. The same considerations hold with reference to the sex of the teacher.

MODERN TENDENCIES CONCERNING THE AIM OF INSTRUCTION AND OF THE BRANCHES OF STUDY.

There is a tendency to omit so-called "useless subjects," but the criteria are variable and often contradictory. The tendency, however, is to omit subjects regarded as involving complex manipulation or difficult theory unless they are of essential and immediate vocational importance. For example, the extraction of numerical cube root, partial payments, etc., are omitted from the courses in arithmetic given in the agricultural schools. On the other hand, the commercial department of a high school omits as useless the subject of graphs from its course in algebra. In general, however,

the tendency is to retain the traditional content of the courses of the general secondary school, except in those schools whose courses are arranged with reference to immediate technical availability.

The general tendency is, moreover, not to increase the content of the courses or to replace old subjects by new except in so far as the so-called "workshop mathematics" may be regarded as a new subject. Such courses are new in their point of view and their concrete material, but not in their mathematical elements.

In this connection may be mentioned, however, the general tendency to introduce elementary trigonometry into the curriculum because of its numerous applications to shop problems and to surveying.

EXAMINATIONS.

There appears to be no noticeable tendency to abolish examinations but rather to subordinate them to the regular work.

METHODS OF TEACHING.

With the increase in the size of the cities and the centralization of industries has come a decrease in the fund of general knowledge which is available in the child as a basis for mathematical instruction. In the days of the small shop in the small town the artisan's boy frequented the shop and used his father's tools. He learned in a desultory and accidental way, perhaps, but nevertheless he learned to plan, measure, and build, and became acquainted with the materials and methods of the various forms of industrial activity. From all this the city boy of to-day is excluded.

In consequence of this the concrete basis which the boy formerly obtained for himself, and unconsciously, must now be systematically provided by the school. The mathematically ill-equipped teacher of an earlier period had no suitable mathematical superstructure to erect on the excellent foundation provided by the boy; the better-equipped teacher of to-day finds the foundation inadequate to support the structure he is prepared to erect. The consequence of this essentially economic change is that systematic intuitive instruction in the school is becoming increasingly necessary and is supplied with increasing frequency, e. g., by the use of "laboratory" and "shop methods" and by the use of concrete problems.

The technical secondary schools from their very nature tend to adapt their instruction to this need more readily than do the general secondary schools, and with apparent success. One school reports:

The boys take hold of mathematics as if they "needed it in their business." Our boys are not exceptionally bright, and yet the best section of girls in a "regular" high school would not be able to keep pace with them.

Along with this tendency to emphasize the intuitive element in instruction, there is the conservative tendency, partly due to inertia

and partly to external academic requirements, to emphasize the abstract element.

In view of the lack of central control of American schools, the existence of these two conflicting tendencies, especially the latter, can not be regarded as otherwise than fortunate for the future of mathematical study and research in this country.

The general secondary schools already feel the competition of the technical secondary schools. The danger lies in the possibility that the attractiveness of the intuitional and immediately available element of the instruction in these technical schools, whose ideal approximates to that of the trades school, may so diminish the abstract and logical element in the mathematical curricula of all the secondary schools, general as well as technical, as to hinder the progress of mathematics as a science in this country.

The lack of concrete basis for mathematical instruction is the cause of a tendency, expressed in the curricula of certain schools, to precede the demonstrative work in geometry by work in "constructive" or "inventional" geometry. The circular of one school says:

This study (geometry) is, first of all, inventional. With ruler, dividers, compass, and protractor, the pupil is taught to draw geometrical figures and then to study and understand them. After a term's work in industrial geometry, the pupil studies plane and then solid geometry with an interest which would not be possible otherwise.

The age of the pupils in the schools considered is such that, once they have become familiar with the elementary geometric concepts through their work in constructive geometry, the logical element of the subject can be made predominant.

Material aids to mathematical instruction are of course much in evidence in schools which make use of the "laboratory" or the "shop method" of instruction. In geometry and trigonometry, when climatic conditions are favorable, outdoor work is occasionally used. In solid geometry the use of models made by the pupils is not infrequent.

Excepting in the commercial schools, where the matter is one of vital importance, the matter of computation does not receive the *general* attention one would expect in schools of essentially vocational purpose. A few schools, however, lay much stress on the matter, and one, at least, offers a course on the subject, the outline of which may be quoted:

COMPUTATION, B class. (Applied Mathematics.)

A course in the interpretation and application of standard engineering formulæ, abbreviated methods of calculation, the use of mathematical tables, approximation by graphical methods, and the use of computing devices. The solution of practical problems.

The aims of the course are:

1. To give the student some adequate acquaintance with computing methods.
2. To develop in him at the same time accuracy and speed.
3. To cultivate the ability to estimate results with a reasonably close degree of approximation.
4. To minimize labor in his calculations.

The experience of the vocational schools indicates that the solution of the problem of giving mathematics a better place in popular instruction and of reacting against the prejudices against the science lies in bringing the subject into such close relation with the activities of daily life, especially those of an industrial nature, that the necessity of a knowledge of the subject is felt. From the standpoint of the progress of the science this is the valuable element in "workshop mathematics."

The dangerous element in "workshop mathematics" is not fundamentally distinct from that which is so often the bane of abstract instruction and against which the representatives of the secondary technical schools so emphatically protest, namely, excessive formalism. By formalism is here meant the unthinking and mechanical execution of mathematical processes without regard to the significance of the data, the operations, or the results.

This formalism may be illustrated by the following problem taken from a published collection that is somewhat widely used: The dimensions of the parts of a rather complex combination of crank, screw, and gears are given, and it is required to find the weight which can be raised by a force of 60 pounds applied to the crank. The mathematical work involved is merely the numerical evaluation of a rational fraction the factors of whose terms are given. The published answer is 203,575.68 pounds; that is, a weight of a hundred tons is given to the sixth part of an *ounce*. It is evident that such a result can be obtained only by a mechanical and unthinking use of the mathematical processes involved, and without the slightest consideration of the significance of the concrete elements of the problem. This is formalism pure and simple, and it is the more pernicious in that it masquerades under the guise of "shop mathematics" and claims to be an example of "how to apply mathematical principles, rules, and formulas to the solution of such (i. e., shop) problems."

There is a desire among some of the teachers of mathematics in the secondary technical schools to break down the conventional barriers between the several branches of mathematics, and in a few cases this desire has been realized. The principal difficulty mentioned concerning this movement appears to be the lack of textbooks designed for such combined courses, a difficulty which is not inconsiderable by reason of the dominant position of the textbook in American mathematical instruction. A few such texts, however, have been published.

There are administrative difficulties, particularly in the case of schools which articulate closely with the grades on the one hand and the colleges on the other, and these difficulties, while not mentioned by the schools, have proved a serious barrier to the movement in the colleges. The conservatism of teachers also retards the establishment of these combined courses.

It would appear that the technical and industrial schools offer unusual advantages for the development of combined courses, because of the fact that, in the newer ones at least, the articulation with established schools is less close and the force of tradition less strong than in the general secondary schools. It must be remembered, however, that these combined courses are of comparatively recent origin, while the traditional courses are the result of a long period of evolution. The combined course is in the experimental stage, and for this stage of its evolution the secondary technical schools offer, for the reasons just mentioned, a favorable culture medium.

Wherever the courses are separated it appears that the study of the elements of algebra precedes that of plane geometry. The relative position of the second course in algebra and that in solid geometry is variable.

RELATION BETWEEN MATHEMATICS AND OTHER BRANCHES.

While *systematic* coadaptation of the courses in mathematics and those in other subjects is not general, there is a strong tendency to make such adaptation to a greater or less degree. The tendency may, and sometimes does, take the form of emphasis on the application of mathematical results at the expense of the logical and demonstrative element of mathematics and of its dignity as an independent science. The "pocketbook engineer" has his counterpart in the secondary schools. More frequently, however, the tendency finds a more rational expression in the form of emphasis, in the mathematical courses, upon problems derived from other branches. These problems may serve as an introduction to the demonstrative work or as an application of its results.

The difficulties and dangers in the working out of this tendency are precisely the same as those which arise in a similar situation in the higher schools. Unfortunately, neither the teacher of mathematics nor the teacher of the technical subjects is omniscient. The one lacks technical training, the other a thoroughly grounded knowledge of the science of mathematics.

A study of published collections of problems used by some of the schools indicates that the mathematical principles involved in the technical problems considered in their courses are, for the most part, of a very elementary character. In geometry, the propositions

of congruence and similarity, the theorem of Pythagoras, and the mensurational theorems; in trigonometry, the definitions and elementary properties of the functions with their use in the composition and resolution of vectors; and in algebra the fundamental operations and the solution of linear equations and binominal equations of lower degree form the theoretical basis for the greater part of the problems in question. The problems arising in surveying, of course, require more extended knowledge of trigonometry, and the varied problems of the machine shop involve algebraic principles of a more advanced character.

For example, problems on the efficiency of hoisting devices (friction considered) and in the design of cone pulleys involve geometric progressions; problems of gearing and screw cutting involve indeterminate equations, Euclid's algorithm of the greatest common divisor and continued fractions.

REPORT OF SUBCOMMITTEE ON SECONDARY COMMERCIAL SCHOOLS.

Sources of information.—This report is based on statistical information obtained by means of questionnaires and on other data available to the members of the committee, especially the chairman, as members of the instructing staffs of commercial schools.

The report was prepared by the chairman of the subcommittee in consultation with the other members and with the chairman of the committee on secondary technical schools.

Aim of the report.—As some of the work of the schools considered does not greatly differ from that of general secondary schools the subcommittee has confined itself largely in this report to the consideration of the points of difference between the work of the commercial and of the general secondary schools—the nature, cause, and results of these differences.

Classification of schools.—The schools considered by the subcommittee fall into three classes, viz, high schools of commerce, commercial departments of general secondary schools, and private commercial schools (the so-called business colleges).

The private schools were first in the field; their primary aim was and is preparation for immediate vocational activity. Though they are, therefore, essentially of the same nature as "trades schools" and are largely conducted for profit, the committee is impressed with their educational value and the professional spirit of their instructing staffs.

There are many of these schools throughout the country. The fact of their existence is proof of the demand for the kind of education they offer. It is a further testimony of the work done by these schools when it is cited that some cities, as Berkeley, Cal., already offer a two-years' course in commercial subjects. Boston, Mass., has just voted to establish a central clerical high school, to be in session from 9 to 5; its scope of work will be that usually offered by the best business colleges.

The commercial department in the general high school is the natural outgrowth of the success of the private commercial school, just

as earlier in the history of our country the general high school was the outcome of the success of the academy. Moreover, just as the private academies began to go out of existence with the success of the general high school, so that now but a comparatively few of those in existence from 1850 to 1860 still remain, in the same way it is probable that the public schools will do more and more of the work now being done by the private commercial schools. And just as there are now some academies still in existence, and in a most healthy condition, so is it likely that we shall always have our private commercial school; but it is improbable that we shall have all that we have at present.

The same observation which is made here with regard to the pioneer work of the "commercial college" is manifest in the history of many features of our present educational system; the need is first shown by experiment carried by private enterprise, either philanthropic or commercial; then the public-school department, hitherto passive, becomes eager to incorporate the private success into its own field of activities.

Since the commercial department of the general high school aims to do the work of the private commercial school, there will be but little to report in regard to them in addition to what will be reported for the private school beyond the fundamental differences between the two kinds of schools in all respects.

The commercial high school is but one step beyond the commercial department and must be from the nature of affairs restricted to the larger cities. However, this step to the separate high school is a long one. The "high school of commerce" expects to give a better fitting for business life than either the private commercial school or the commercial department can; better than the one because the course is longer and its scope is broader; better than the other because the work of the four years in the high school is much more specialized.

COURSES OF THE SEVERAL TYPES OF SCHOOLS.

In the private commercial school the length of course varies from three months to two years, depending on the preparation and wish of the pupils. The usual course, however, is for one year. Certificates or diplomas are given for work covered. The same work is given for both boys and girls, as would be expected since they are found in the same class. The entrance requirements are not as clearly defined as for the public secondary school; the scheme is rather to put the pupils into those classes where they can take up the work to best advantage. The age of the pupils varies from 14 to 20, as a general rule; both younger and older pupils, however, will be found in attendance.

In the commercial department of the high school, the course is of four years' length; the studies in the commercial department are but a part of the student's studies; the others are taken from the general course of the school. The diploma given at the end of the course is the general school diploma and does not usually specify that the pupil is a graduate of the commercial department; it states rather that he is a graduate of the school; the diploma is the same as that given to the graduates of all the other departments of the school—this statement holds true so far as facts have come to the observation of the members of this committee. The work of the first year for pupils in this course does not vary materially from that of the other pupils of the school; accordingly, the same entrance requirement holds for all—that they satisfactorily complete the grammar-school course. The average age is from 14 to 20 years from entrance to graduation.

In the commercial high school, usually called "high school of commerce," the same general consideration for age and entrance holds true as in the case of the commercial department. The curriculum, however, is more specialized. The aim of the school is to prepare for a commercial life in a broad sense. The commercial departments prepare more for secretarial and clerkship positions and make bookkeeping, stenography, and typewriting the courses around which the work of the school centers. The schools of commerce make the economic sciences and courses the subjects around which the work of the school centers. The other subjects are studied, but are given but comparatively small emphasis in working out the aims of the school. Business men's organizations connected with such schools are of great value to them.

THE AIM AND SCOPE OF THE MATHEMATICAL INSTRUCTION.

The only branch of mathematics that is taught in the private commercial school is commercial arithmetic—sometimes called business arithmetic. The placing of commercial arithmetic as one of the branches of mathematics is one of the points of difference between the American and the German practice, for in Germany it is considered as one of the branches of the commercial studies. The aim of the work is to give drill, constant drill, in the ordinary operations of business, so as to secure habits of accuracy, speed of computation, and skill in mental operations.

There are usually five recitations per week, and the usual length of the recitation is 45 minutes. Some schools have recitations, however, that are one hour in length. The work in commercial arithmetic in these schools is made to correlate more with the work in bookkeeping than with any other subject. The teachers in these schools frequently make the complaint about the previous prepara-

tion of their pupils in arithmetic, that they lack in accuracy, speed, and knowledge of practical problems. Some schools report, however, that the foundation which they have in mathematical training is excellent for the drill that the business college wishes to give them. The comment made by the teachers in these schools is also made by many of the teachers in the other types of schools.

In the commercial departments the same subject is offered as is offered in the private commercial school—commercial arithmetic. The subject is nearly always elective in the school, but required for those who wish to take the commercial course. The length of recitation period varies from 40 to 45 minutes usually, and the number of recitation periods varies from two to five per week throughout the year, or the equivalent of it. The work is most often taken in the second of the four years of the pupil's course in the high school. It is sometimes, however, taken up in the first year of the course. In schools where the pupils also take algebra either the arithmetic is carried on at the same time that the algebra is or it is taken up after the pupils have had one year of algebra. The latter is more often the case. Accordingly, the usual age of pupils taking this subject is 14 to 16 years. In the New York High School of Commerce the subject is given by the commercial department; in Boston by the mathematical department.

In such schools as these the commercial arithmetic is usually correlated with the work in bookkeeping; less often it is correlated with work in physics. One school reports that it is made to correlate with the study of commercial law. It is very evident where this can be done, since the discussion of many problems arising in commercial arithmetic involve questions of both custom and law.

Where algebra is offered in these schools the pupils of the commercial departments are found in the same classes that the pupils of other departments are found in. Hence the report given by the committee on the general high school as regards algebra will be applicable to the algebra of the commercial departments. This same observation holds true for geometry and trigonometry.

In the commercial high school, however, mathematics is given more time. In the first year algebra is taken up for either four or five periods per week, with recitation periods of from 40 to 45 minutes in length. The algebra is offered largely as a vocational subject, and the problem is made the central thought in the development of the subject; the equation is studied in so far as it will help in solving the problem, and the different processes are taught only in so far as they help in solving the equation. The general aim is to study the applications, and only such principles of the science as help one to understand the applications.

The work in this subject is correlated with the other work of the school. It is evident where it is correlated with arithmetic, from the close relation existing in the nature of the subject, it is correlated with the work in science, in drill work, in the formulas of physics, and in problems taken from the field of natural science. In the use of squared paper and in the graphical representation of simple statistics, it is correlated well with the work in commercial geography and economics; in the matter of requiring the same standards of good penmanship that are exacted in the penmanship classes and in the matter of rapid calculations, invoicing, and the various applications of percentage, it is correlated with the business technique classes; in requiring explanations, oral and written, expressed in good English, it is correlated with the work of the English department.

The description here given for the method of teaching algebra is taken from the usage of the Boston High School of Commerce; it applies with equal force to a great many general high schools of the country. It would be very hard to present a statement about the teaching of algebra that would be above censure; some criticism would be sure to come from some part of the country. There is a feeling of unrest throughout the country as regards the teaching of algebra, and eagerness to make the subject more significant than it has yet been in secondary instruction.

The work in commercial arithmetic has all the features of the same work done in the private commercial schools and in the commercial departments. The time allowance is the same as for algebra. Since the merchants are much interested in these schools, practical material is available from them which would be otherwise impossible to obtain. The stores of the city are the laboratories of the students of the commercial high school. The books and accounts of such stores have much material that is of the utmost value to the school, and that material is being sought out by the teachers of the commercial high school, and already quite a little has been brought into use in the classroom.

Besides the drill in rapid and accurate performance of arithmetical operations, this work aims to give drill in the real significance of numbers, drill in habits of sustained attention and concentration of effort, and drill in specific problems brought in from the business houses. The general aim is to give drill rather than to teach the pupils anything new. The subjects emphasized are the fundamental operations applied to integers, common fractions and decimal fractions, percentage, interest, stocks, bonds, sinking funds, insurance and taxes, and equation of accounts. Arithmetical operations which are seldom found in business are omitted.

This work is correlated with other departments of the school in many ways. The extensive study of significant statistics having to

do with the commercial life of the city, State, or Nation, and the graphical representation of the same in all the more common forms of graphics are of great value to the pupils in their economic studies later on, as is likewise the study of actual problems in stocks, bonds, and sinking funds. The teachers of bookkeeping and commercial arithmetic are constantly in communication, so that their work may be of much assistance to each other. The work of the English department is emphasized as in the case of algebra. The work is correlated with the science department in the manipulation of some of the practical problems encountered in the science work.

Geometry and trigonometry are sometimes studied, but they are studied for their cultural rather than for their vocational values; accordingly there is a freedom of method and choice of theorems which would otherwise be impossible.

It is pointed out that a school which emphasizes the practical side of algebra should also emphasize the practical side of geometry and trigonometry. This statement is true, and it is quite probable that some time in the future we shall have a course in these studies more applicable to the commercial high school. This, however, is a problem which has not yet been worked out in connection with so comparatively recent a departure in education as the commercial high school.

The preparation in mathematics of pupils entering the commercial high school is the same as that of those who enter the classical high school or the general high school. Since these features of the American educational system should be more properly treated in the reports concerning those schools, they will be omitted here.

In both the private commercial school and the commercial department, special desks are provided for the students; these desks are made to conform as much as possible to commercial usage. In the commercial high school these desks are found in the department of business technique.

In some schools which have no commercial department a half year of advanced arithmetic or commercial arithmetic is offered during the senior year, less often during the junior year; this course covers such essentials of everyday arithmetic as every high-school graduate is supposed to be prepared with.

THE EXAMINATIONS.

In most States diplomas from the school are not dependent on a final examination of the work covered during the course, nor are the examinations at all of that nature. They are more commonly given every week, two weeks, or month on the work covered during the time since the last examination. The examinations are only incidents of more or less importance in the progress of the work.

The regular daily work is considered of much more importance in estimating the pupils' progress and educational worth than the examinations are. This principle holds true of all three kinds of schools.

THE METHODS OF TEACHING.

Textbooks are very freely used both for class work and for home work; and many excellent books on commercial arithmetic have been written by the teachers in these schools, particularly by the teachers of the private commercial schools. Since the general aim of the work is to give accuracy and speed, much oral work is given for mental drill. The textbooks are made up of the kind of problems that are met with in the business activity of the country as far as the author has discovered usage and custom of business houses.

Interest tables, simple and compound, are the only kind of tables that find much use in the arithmetic work; a few schools report the use of logarithmic tables. The Boston High School of Commerce advocates their use in the commercial arithmetic work, by the observation of their use in statistical offices by people who have never studied any mathematics beyond the arithmetic.

Many of the private schools, fewer of the public schools, report the possession of adding machines. This is not surprising when we consider how recently such machines have come into general commercial use. It is significant, however, that our schools are beginning to recognize that the adding machine is as necessary to modern business as is the typewriter. Instruction on the latter forms a recognized part of every commercial course, and within a few years the skillful operation of the adding machine will doubtless be taught in all the well-equipped commercial schools.

One school reports the possession of a cash register and loose-leaf ledger. Other kinds of calculating machines are seldom, if ever, found in the schools.

Some teachers in the commercial high school report the use of the laboratory method to good advantage. By this method a set of exercises is chosen, in some such subject as common fractions, from the commercial life of the city, State, or Nation. Each pupil is given a separate problem—an experiment—on which to work. Inasmuch as all problems are different, the pupil is thrown on his own resources; since results are proportionate to efforts expended, such work offers an incentive to ambitious pupils for extra work.

Sets of exercises have been compiled for such subjects as addition and subtraction, multiplication and division, common fractions, decimal fractions and percentage, exchange work, stock invoicing, marking goods, and sinking funds.

The methods in algebra vary from the usual course in that subject as much as is consistent with the different aim of the subject; the

mental exercises are more particularly drilled in the commercial high school than in the general high school. Ratio and proportion are taken up early in the course, since the work is so closely related to the work in equations.

Geometry is taught quite irrespective of college entrance requirements.

PREPARATION OF CANDIDATES FOR TEACHING.

But a few of the teachers in private commercial schools are college men. The preparation of the teachers for the work of instruction has been by attending the private commercial school, or by having attended a commercial department in a general high school, or by having had actual business experience. Many of the teachers in these schools have had this business training, and, of course, this fact gives them one excellent qualification for this particular kind of instruction. Teachers are quite often found in these schools who have had practical training in higher accounting or have pursued courses in the subject.

The preparation of teachers for the commercial high school is of higher grade, from an academic point of view, than that of teachers of the other two departments. The best teachers for this particular kind of a school are yet to come. The school is a comparatively recent innovation; accordingly, the demand for teachers for this special kind of school is comparatively a new one. They nearly all now have good academic training; what they will need in the future is more business training. The teachers are taking the problem seriously, too, and are making decided and effective steps to supply their deficiency in these regards.

The preparation of the teachers in the commercial department of the high schools, of necessity from the nature of affairs, has been much the same as that for private commercial schools. Preparation has been mainly in the private commercial schools and from the commercial departments of the high schools. A smaller number by far have obtained business experience; this is probably due to the lack of salary inducement more than to the nature of the problem.

In the past, few college men, or women, have gone into this line of professional work; but with the present tendency toward vocational education, so manifest in the country, more college men are undertaking it.

A marked advance was made two years ago when the Salem (Mass.) State Normal School offered both pedagogical and vocational courses in the commercial subjects. This course has met with such success since its institution that the course has been lengthened to three years, with a corresponding addition of opportunities offered to the students. A few other State normal schools in the country had previously offered the vocational courses. The Albany (N. Y.) State

Normal College has since then offered the same kind of courses that the Salem school offers. The private normal school at Valparaiso, Ind., has long conducted training courses for commercial teachers, as have also several other private normal schools of the Middle West. It is further interesting to note that the Teachers College of New York City is preparing to inaugurate (1910-11) a course in commercial arithmetic, and later one in stenography and typewriting. Simmons College for Girls, of Boston, for the past few years has also been meeting the demand for instruction suitable for preparation for teachers of commercial departments of high schools.

It can readily be seen that a great many teachers of commercial subjects in the future will get their preparation from these normal schools. It is well that these schools offer this opportunity, for the demand for commercial education becomes more pronounced year by year, and there is constant demand for more and better trained teachers.

REPORT OF THE SUBCOMMITTEE ON SECONDARY AGRICULTURAL SCHOOLS.

The agricultural high school is of recent origin in the United States and owes its existence to several causes. Probably those most potent are the growing conviction in the mind of the rural community that it must furnish some form of education beyond that given in the district school of grammar grade, the recent awakening to the necessity of industrial education of some form for every community, and the attempt to induce the General Government to appropriate funds toward the support of agricultural high schools in each congressional district.

That the concentration of school districts in the country, with provision for the transportation of pupils from a sufficiently large territory to form a graded school, has materially increased the efficiency of the rural schools is undisputed. That the same principle extended to the secondary school will be successful is expected by the rural communities which have undertaken the task of secondary education.

These secondary schools, started in agricultural districts and maintained in practically every instance by public funds, in many cases by the State itself, have attempted with more or less success to adapt the work of the school to the principal industry of the section—that of agriculture, and accordingly they have formed their curriculum to give prominence to the sciences underlying that industry and have curtailed the instruction in other lines, most noticeably perhaps that of foreign language.

This brief statement is made by the subcommittee in order that the result of the questionnaire sent out may be better understood.

Your subcommittee sent to the department of public instruction of nearly every State a request for the list of secondary agricultural schools within the State, and in practically every instance a reply was received giving the information asked for. In many instances schools not of secondary grade were mentioned, as well as schools in which "some" agriculture was taught, but which were not styled agricultural schools. The subcommittee, believing that an inquiry into the teaching of such schools was not within their province, rejected all schools mentioned which did not seem to come under the head of secondary agricultural schools. As a result of the inquiry, a list of 65 schools was obtained which seemed to embrace all that properly came under the class delegated to this subcommittee.

The distribution of these schools was of interest to the subcommittee. About half the number were in the Southern States, and nearly as many in the middle Western States, while the East and Far West were represented by an occasional school. Some of the leading agricultural States seemed to have no schools of this kind, notably Iowa, Illinois, Missouri, and Kansas. It was found that schools of this class existed in only about one-fourth of the States, and that in but 8 States, of which 5 were Southern States, did they seem to be established by districts.

A questionnaire of limited scope and admitting of easy reply, covering the source of students, method of support, kind of control, special aim of school, general and mathematical curriculum, methods of admission, and special questions on the instruction in mathematics, was framed and sent to the schools listed, and replies were received from about 40 per cent of the number, and judging from the replies, in most instances from typical schools of the different sections. Based on these replies, the following deductions and comments are given:

The schools are generally located in the country, or in small rural towns, and draw their students largely from the homes of the farmers, although a number report that the students are recruited from all classes. They are all supported by public funds. Some have State support and others are maintained by local taxation. In most instances both State and local funds are used. They are practically all coeducational.

The predominant aim seems to be to fit the pupil for farm life, and to emphasize those subjects bearing on agriculture and domestic science. In many instances the avowed purposes of the school are to create a deeper interest in things agricultural, to direct the interest of the pupil to the problems of the farm, and to hold the attention to the advantages of rural life as compared with those of the city.

To attain these ends the curriculum is more or less affected. Special stress is laid upon the sciences, and departments bearing directly on agriculture and domestic science are introduced. A number report that the curriculum is not materially affected, some that it is more practical or more scientific, others that it is industrial, and one that all subjects are taught from the standpoint of the farmer. To provide for the vocational subjects in many instances the amount of foreign language taught has been curtailed.

The mathematical curriculum is reported by many schools as not at all affected by the special object of the school. A few report that the amount of mathematics is reduced. One reports more geometry and surveying than would otherwise be given. Quite a number report that the work is more practical and that advanced arithmetic and farm accounts are included.

The replies to the question asking how the specific aim and object of the school affected the method of teaching mathematics were so diversified that no general conclusion can be given. About a third of the replies state that the methods are more practical, but only a few state in what way—that is, whether in subject matter and character of problems or in methods of teaching. About a fourth of the replies state that the method of teaching the subjects is not affected. Several make no reply, probably because the methods are unaffected. One states that the laboratory method is used and one that the work is mostly individual on account of the uneven preparation.

The subject of the correlation of the various mathematical subjects seems to have received but little attention, and but few report any effort in that direction. No attempt seems to be made to correlate mathematics with agriculture, except in the case of arithmetic. A few report that an attempt is made to correlate with physics and with science. In general a favorable opinion of correlation is expressed, although it appears that very little attention is given to the matter.

The use of the laboratory method with mathematical subjects seems in general to be very limited. Where used the reports state that the results are good.

In general the requirements for entrance are the completion of the work of the common school, which varies somewhat in the different localities. Eighth grade arithmetic seems to be about the maximum requirement in mathematics. One reports no entrance requirement excepting a minimum age limit of 14 years for boys and 13 years for girls.

Entrance is generally secured by either examination or certificate, although a few admit by examination only. The work in mathematics in the different schools, while showing a considerable variation, differs more in degree than in subject matter. A majority of the schools present arithmetic of some sort, under the name of prac-

tical arithmetic, farm accounts, bookkeeping, mensuration, etc. Practically all include a reasonably good course in algebra. Well-known texts are used and a fair amount of time allotted to the subject. The same may be said of the course in plane geometry, while a number pay attention to the applications as well. Solid geometry is given in quite a large number of the schools, and the time allotted to the subject seems sufficient to do the work satisfactorily.

In about 25 per cent of the schools replying trigonometry is given, and in a somewhat smaller number, plane surveying.

The relative stress placed upon mathematical dexterity, analytical power, accuracy, and logical keenness seems to differ widely in the different schools. A disappointingly large number seem to put no special stress on accuracy.

Owing to the recent establishment of this type of school in this country the curriculum is yet in a formative state. Undoubtedly a satisfactory course for these schools will be developed, probably as a part of the larger problem of industrial education. On account of its practical character and wide application, mathematics is sure to occupy an important place in this kind of education. That the subject matter, problems, and applications of mathematics to various industries can and should be much better presented than has been done in the past seems obvious.

SUPPLEMENTARY REPORT ON THE INDUSTRIAL SCHOOL OF SECONDARY AND INTERMEDIATE GRADE.

Within the last decade the industrial school of secondary and intermediate grade has assumed an important place in our system of education.

It has been felt that both elementary and secondary schools have made it too generally their aim to prepare the pupil for eventual higher education and have in consequence laid too little stress on preparing him for immediate vocational efficiency. To this may be attributed the sudden decrease in school registration at the end of the period of compulsory attendance.¹

To satisfy this demand for vocational education of intermediate and secondary grade numerous technical and industrial schools have been established and are being established in all parts of the country.

In order to determine the nature of the mathematical curricula of these schools, and in particular to determine what mathematics their authorities consider essential for industrial efficiency, the following circular was sent to about 40 schools listed in Bulletin II of the National Society for the Promotion of Industrial Education:

I. What is the mathematical preparation required of a candidate for admission to your school?

¹ Massachusetts Commission on Industrial and Technical Education. Report, 1906.

- II. What textbook, if any, do you use in each branch of mathematics taught in your school?
- III. Is the mathematics in your school similar in scope, content, and method to that in the ordinary academic secondary school?
- IV. If it is not, is it practical, applied, or shop mathematics?
- V. What topics, parts, or subdivisions of algebra, geometry, arithmetic, etc., do you include in your course in mathematics?
- VI. How much time (hours a week, weeks a year, and years) do you devote to each branch of mathematics?
- VII. Can you furnish me with a few specimen problems used by you in the various branches of your practical mathematics?
- VIII. Could you send me specimen examination papers which you have set for your classes in the various branches of mathematics?

Replies to these questions were received from 21 of the 40 schools. It appears from the answers that of these 21 schools 2 are of college grade, and hence need not be considered here; 6 are high schools of the usual type, listed as industrial schools because they offer a certain amount of shopwork; 2 are schools for apprentices; and the remaining 11 are really industrial schools.

The replies may be summarized in part as follows:

I.—*Preparation for entrance.*

	Number of schools.
No preparation required for entrance.....	1
Knowledge of the fundamental operations.....	2
Mathematics of the first six grades of the elementary school.....	3
Mathematics of the first eight grades.....	13

II.—*Use of texts.*

It appears that a number of the schools use no text in certain or in all of the subjects, but that when texts are used they are of the type employed in general secondary schools. The results in detail are as follows:

Subjects.	Number of schools using—		
	No text.	Text.	Total.
Elementary algebra.....	8	11	19
Plane geometry.....	9	10	19
Solid geometry.....	1	4	5
Plane trigonometry.....	5	5	10
Advanced algebra.....		4	4
Elements of bookkeeping.....		2	2

III.—*Scope and content of course.*

Most of the schools aim at including in their course the mathematical work ordinarily given in the general secondary school. They ordinarily give in addition instruction in such matters as percentage, mensuration, and the use of formulæ.

All claim a scope and content of course more extensive than that of the general secondary school.

IV. *Is the work practical, applied, or shop mathematics?*

The schools all claim that it is eminently so.

VII. *Problems.*

There is a marked difference in the character of the problems submitted by schools which are merely general high schools with shops attached and those which are essentially industrial schools. In schools of the former class the problems are for the most part similar to those found in the mathematical tests used in general secondary schools. In a long list of problems submitted by a school of this class, the nearest approach to an industrial problem is the following:

“In a hexagonal nut the distance across the flats is $1\frac{1}{2}$ times the diameter of the bolt plus $\frac{1}{8}$ inch. The thickness of the head is one-half the distance across the flats. A hexagonal nut is $\frac{5}{8}$ of an inch on a side. Find the distance across the flats, the approximate diameter of the bolt, and the thickness of the head.” The problems submitted by schools of the latter class are apparently drawn from industrial practice. They involve, however, no mathematics beyond mensuration and the arithmetic of the elementary schools.

If one is to judge the mathematical needs of the secondary industrial schools on the basis of the problems submitted in answer to the questionnaire, it seems that direct use is made of little mathematics beyond arithmetic and certain elementary facts of algebra, geometry, and trigonometry. Nevertheless, these schools apparently cover the traditional mathematical curriculum of the secondary school. It would appear that in the present early stage of their evolution these schools have not yet satisfactorily adjusted the content of their courses to the concrete external demands of the shop, on the one hand, and the more abstract internal requirements of good pedagogy, on the other. There are certain problems frequently arising in machine-shop practice which do not appear among the problems submitted, and which require for thorough comprehension much more than the usual mathematical course of the secondary school. The operation of “compound indexing” on the milling machine requires the solution of a linear indeterminate equation. Certain operations with the screw-cutting lathe require the approximate representation of a given rational or irrational number by the convergents of a continued fraction and the determination of the error of the approximation. The fact that such convergents give the best approximation obtainable by means of rational fractions of denominator not exceeding that of the convergent is of prime importance here. Not only this, but the following problem often arises: To express with as great

approximation as possible a given irrational or rational number by means of a product, $\frac{n_1}{m_1} \cdot \frac{n_2}{m_2}$ of rational fractions in which n_1, n_2, m_1, m_2 are comparatively small integers.¹

In certain industrial schools mathematics, though definitely included in the course of study, is not taught as a separate and distinct subject. It is simply introduced as the student happens to strike some phase of work in the shops or drafting room which requires the knowledge of a certain fact. The fact is brought out for his immediate use. In this way he obtains his mathematics.

The question now arises, How much of this instruction is valuable? How long can the student, so taught, retain the knowledge of the facts given him? Can he, moreover, appreciate the facts brought to his attention?

In the first place, such instruction can hardly develop any originality on the part of the pupil. In the second place, he has not the apperceptive mass, from which the various mathematical facts and relations can be drawn out. At best, he can only be made to see that the statements made to him are plausible. At most, he sees only a glimmer of light, and then comes total darkness. When one realizes how difficult to most pupils are certain propositions in geometry, what must one's judgment be upon a method of teaching which tries to impress merely isolated mathematical facts upon the mind—upon a mind, moreover, which has not been prepared by constant drill to recognize intuitively mathematical relations. The conclusion must be that such teaching can not give the student power or lasting knowledge. Often no better teaching can be done on account of the lack of time, but such teaching should not be designated as instruction in mathematics.

In conclusion it may be said that in schools in which mathematics is taught as a distinct subject, the course has not yet been developed which will provide thorough and adequate preparation to attack with full understanding the problem of the shop. It is doubtful whether such preparation can be supplied with much less attention to the formal and logical element than is now customarily given.

The instruction in schools which have no separate mathematical course must, in its present condition, at best be regarded as an undesirable though possibly necessary concession to the demands of a brief course.

The problem of constructing a course which shall be both mathematically and industrially satisfactory is as yet unsolved, largely for the reason that the schools of both types are as yet only in an experimental state.

¹ "A Practical Treatise on Gearing," Brown & Sharpe Manufacturing Co., Providence, R. I.

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A STUDY OF EXPENSES OF CITY SCHOOL SYSTEMS

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LETTER OF TRANSMITTAL.

DEPARTMENT OF THE INTERIOR,
BUREAU OF EDUCATION,
Washington, February 14, 1912.

SIR: It is of the greatest importance that careful attention be given to the expenditures made by all governmental agencies. The expenses of certain cities rival in amounts the expenses of State governments. From 20 to 50 per cent of the expenses of cities go to the support of the public schools. Over \$200,000,000 are expended annually by the city school systems of the United States. Doubtless thousands of dollars of this amount might be saved each year if each city knew the proportion in which other cities are distributing their money among the various school activities and the unit cost for each activity. Likewise, cities which are confining their endeavors within a too narrow range, or which are spending too little upon a particular object, will have these facts revealed. Dr. Updegraff's study, transmitted herewith, furnishes just such information for 103 cities of 30,000 inhabitants or over. It establishes tentative norms for cities of this size. Its value, however, is not confined to these larger cities alone. It provides a method for the treatment of similar statistics of smaller cities, towns, and rural districts. A superintendent or a fiscal officer may take such data as are found in national and State educational reports, and by following the method observed in this monograph may ascertain the true relation of the expenses of his own system to such others as he desires to include in his study. I therefore recommend the publication of it as a bulletin of this office.

Very respectfully,

P. P. CLAXTON,
Commissioner.

A STUDY OF EXPENSES OF CITY SCHOOL SYSTEMS.

The object of this bulletin is threefold: (1) To provide those charged with the administration of public schools in the largest cities of the United States the means of making exact comparisons of cost between any two or more cities, with a minimum of effort; (2) to establish certain standards by which any item of expense of any city of 30,000 population or over may be measured and by means of which comparisons of expenses of this and future years may be made; (3) and to present certain conclusions regarding urban education which a study of the statistics seems to establish.

Current expenses, or "expenses," include the costs of conducting a business or an enterprise of any sort which involves expenditures. Set over against expenses are capital outlays. Under this latter head are the costs of the original plant and its extensions and their equipment. Payments to sinking and other funds, interest, and similar payments are not embraced in either of the above classes.

The basal data used in this study were gathered by agents of the Bureau of the Census, who personally visited the fiscal offices of the cities included and with the assistance of those in charge compiled the statistics from the account books and vouchers. The data as reported to the Census Office were placed at the disposal of the Bureau of Education.

The fiscal years of city school systems are not uniform; in fact, there is the greatest diversity in this particular. The closing dates of the fiscal years included in this study lie between July 1, 1908, and June 30, 1909.

The 103 cities of 30,000 population or over whose expenses are presented in the study are divided into four groups. Group I is composed of cities of 300,000 population or over in 1910; Group II, of cities of 100,000 to 300,000; Group III, of cities of 50,000 to 100,000; and Group IV, of cities of 30,000 to 50,000. The number of cities in each of the respective groups is as follows: 13, 20, 42, 28. The total number of cities in the United States in 1910 above 30,000 in population was 184, distributed among the various groups as follows: 18, 32, 59, 75. This study includes, therefore, practically two-thirds of the cities in the first three groups (72 per cent, 60 per cent, and 71 per cent), and one-third (37.5 per cent) of the cities in

the fourth group. Each group is sufficiently full to warrant valid conclusions respecting each group alone and its relations to the other groups.

The cities appear in the order of their population in 1910. Each city bears the same number throughout all the tables.

CLASSIFICATION OF TABLES.

The principal tables are grouped as follows:

1. The basal tables containing seven financial tables showing in detail the cost of each kind of expense for each city. (Tables 16 to 22.)

2. The percentage tables, containing six tables showing in detail for each city the percentage which each kind of expense is of the entire expense. (Tables 23 to 28.)

3. The average cost tables (two tables), showing in detail for each city the annual cost per pupil, based on enrollment, of each kind of expense for instruction, operation, and maintenance of elementary and secondary schools. (Tables 29 and 30.)

4. One table showing the per capita cost of school expenses based upon population, the comparative cost of school expenses and city expenses, and of school expenses and expenses for police. (Table 31.)

5. One table comparing the total costs of elementary and secondary schools in each city. (Table 32.)

The various items of school expenses are classified in these tables under the following heads:

1. Expenses of general control.

2. Expenses of instruction, operation, and maintenance of elementary schools.

3. Expenses of instruction, operation, and maintenance of secondary schools.

4. Expenses of instruction, operation, and maintenance of normal, evening, vocation, and special schools (totals only).

5. Combined expenses of instruction, operation, and maintenance of schools of all kinds.

6. Miscellaneous expenses.

One table is devoted to each of these heads in both the basal and percentage tables. Only heads 2 and 3 are represented in the average cost tables, because satisfactory units of measure were not available for the other items. The actual costs of kindergartens are segregated in a separate table. But because many cities do not separate the expenses of kindergartens and elementary schools, it is not possible to make a fair comparison of the expenses of all the cities for these classes of schools separately. They are therefore combined with the expenses of the elementary schools, and no computation is made of percentages and average costs of kindergartens.

The classification of items under each of these heads is not in accord with the classification of the new standard fiscal schedule of the Bureau of Education as adopted by the Department of Superintendence of the National Education Association. The tables were completed before the new schedule had been framed, but after the time when it was clear that the arrangement of the Census Office schedule would not longer prevail. It was thought best to place certain items under miscellaneous expenses rather than to incur the risk of finding them misplaced later under one of the more important heads. Of these items, school census and elections, and truant officers and police have been placed in the new schedule under "General control," insurance has been assigned to "maintenance of school plant," while medical inspection and nurses, and transportation of pupils have been placed, together with libraries, in a new division called "Auxiliary agencies."

No differentiation has been made between expenses of instruction, operation, and maintenance, for the reason that the definition of the items in accordance with which the basal statistics were collected made it impossible.

GENERAL METHOD OF TREATMENT.

It has come to be generally accepted that the way in which to give the clearest and at the same time the most accurate measure of a series of numbers is to state the median of the series and the limits of the middle 50 per cent. In time past the arithmetical mean or average has been used for this purpose, and it still has its value. Nevertheless its disadvantages, especially that of the undue weight exercised by a number which is very large or very small as compared with the others in the series, are causing the increased use of the median wherever practicable.

The determination of the median and of the middle 50 per cent requires first the arrangement of numbers or values in a series according to their amounts and then the numbering of the series, beginning with the lowest. The median is the amount above and below which one-half of the members of the series falls. In other words, it is the middle one (halfway between the two next the middle in case the number of things is even) of the things involved, distributed in the order of their amounts or values. Thus, if the number of cases or things were 17, the ninth case would be the median, because there would be 8 above and 8 below it. If the number of cases were 16 the median would be obtained by finding the halfway point between the value of case 8 and case 9.

The middle 50 per cent is found by various methods. The method followed in this study is one of the simplest. By the term as it is here used is meant the two limits between which are found those

cases, amounting to one-half the total number, that are nearest the median, one-half the middle 50 per cent of the cases being below the median, the other half above it. For example, if the number of cases were 16, cases 5 to 12, inclusive, would compose the middle 50 per cent, and the amounts of these cases give the limits of the middle 50 per cent. When the number of cases is such that the upper and lower limits of the middle 50 per cent fall between two numbers, the halfway points between them are taken as the limits.¹

The medians and the limits of the middle 50 per cent for each column are given by groups in the first lines of each table.

The second feature of the general method of treatment is the "ranking" of the various amounts in each column by groups. The "rank" of an item is its place in the series as arranged for the determination of the median and the middle 50 per cent, as just described, the item lowest in value being given rank 1, the next to the lowest rank 2, and so on. In other words, the "ranks" are the result of the process of the numbering of the series, which necessarily precedes the determination of the median and the middle 50 per cent. No element of comparative worth is attached to the numbers given. In some items, as in fuel, it is creditable to a city to have a low number; in others, a high number. The purpose for the insertion of the columns entitled "rank" in the tables is merely to facilitate the comparison of items.

BASAL TABLES.

The basal tables (16 to 22) contain the actual expenses, in dollars, for each city. The remaining groups of tables are based upon them, either in whole or in part, and serve to interpret more clearly the facts therein presented. All comparisons of actual costs must be made from this table.

The principal tables in this group are: 16, which gives the costs of general control subdivided according to the different functions which operate in this field; 17, which gives the expenses of instruction, operation, and maintenance of the elementary school subdivided into the different purposes for which the expenses were incurred; 18, which gives the same for the secondary school; 19, which gives the total expenses for instruction, operation, and maintenance of city training schools, of evening schools, of vacation schools, and of special schools, without reference to the particular purpose for which various expenses making up the totals were incurred; and 21, which gives the expenses for various miscellaneous activities and objects. Table 20 has been introduced in order to bring together in one table the totals of the amounts spent for each of the various objects in the operation and maintenance of all the types of schools included in

¹ While this method of fixing the limits of the middle 50 per cent is not in strict accord with the most refined technical practice, it approximates the truth within fairly close limits. Those desiring to work out these limits more accurately will find the tables of frequencies for the most important items on pages 23-26.

17, 18, and 19. In 22 are segregated those items of expenses included in 17 which were incurred on account of kindergartens.

Speaking roughly, the \$56,000,000 expended for all educational purposes by these cities were distributed as follows: General control, \$2,000,000; elementary schools, \$43,000,000; secondary schools, \$8,000,000; training, evening, vacation, and special schools, \$1,000,000; miscellaneous purposes, \$1,000,000. Distributing the cost of the elementary, secondary, normal, evening, vacation, and special schools (\$52,500,000 in all) among the various objects for which the expenses were incurred, we find that \$40,000,000 were spent for teaching and supervision, \$2,000,000 for textbooks and supplies, \$4,000,000 for janitors, \$3,000,000 for other expenses of operation, and \$3,500,000 for repairs and replacements. The accompanying table shows the correct percentage of the total expenses for each educational activity and each kind of expense just mentioned.

TABLE 1.—Per cent of total expenses for all cities combined.

Tables.	Items.	Per cent.
16	General control.....	3.45
17	Elementary schools.....	76.20
18	Secondary schools.....	14.93
19	Normal, evening, vacation, and special schools.....	2.75
21	Miscellaneous expenses.....	2.67
	Total.....	100.00
16	Total expenses, general control.....	3.45
20	Salaries of teachers, all schools.....	68.92
20	Salaries and expenses of supervision, all schools.....	2.15
20	Textbooks, stationery, and general school supplies, all schools.....	3.43
20	Janitors, engineers, and firemen, all schools.....	6.92
20	Other expenses of operation, all schools.....	5.23
20	Apparatus and equipment, including repairs and replacements thereof, all schools....	1.57
20	Repairs to buildings.....	5.66
21	Miscellaneous expenses.....	2.67
	Total.....	100.00

These percentages may be accepted as indicating present standards for all cities in the United States of 30,000 population and over. In other words, if all schools in this country were maintained by the Federal Government, Congress would have to appropriate money for their support in proportions approximating those given in this table. This does not mean that each group of cities or each city would or could conform to this scheme. The extent to which variation does occur, as well as the extent to which variation may occur without the necessity of any explanation in order to establish its reasonableness, will appear in the discussion of the next group of tables.

PERCENTAGES OF TOTAL SCHOOL EXPENSES.

The tables containing percentages (Tables 23–28) are practically the same in form as the basal tables (Tables 16–22). Every space in the basal tables has a corresponding space in the percentage tables

in which is shown for each amount its per cent of the total school expenses of the city to which it relates. A column entitled "rank," the purpose of which, as well as the method of using it, is explained upon page 10, is placed by the side of each percentage column.

The median and the upper and lower limits of the middle 50 per cent (see p. 62) for each group are found together at the top of each table.

There are two fundamental questions in a comparative study of the school expenses of cities: First, are the expenses distributed as in other cities? Second, how do the unit costs for the various kinds of expenses compare? The tables in this group furnish the material for the consideration of the first question.

Caution regarding the use of the percentage tables.—Certain limitations upon the value of the conclusions based upon these percentage tables must not be overlooked. While they provide the most convenient method for comparing all kinds of expenses within a single city and the best means for comparing the distribution of expenses of different cities, they do not take into account the differences in the scale or standard of expense upon which cities conduct their systems. A city of low-expense standard and a city of high-expense standard are upon the same plane. Furthermore, while they do reveal every instance of disproportion or departure from mean percentages, it does not follow that such disproportions are improper, for in fact many of them can be justified. All that an instance of disproportion demands is that those in charge shall be able to make such justification. This can frequently be done by reference to the average-cost tables. For example, a high percentage of expenses for salaries of teachers in high schools may be justified partially or wholly if the average cost per pupil for that instruction does not vary far from the average.

Costs of operation likewise need to be interpreted by means of units for measuring such expenses. As these have not yet been generally adopted, such data as are available concerning the size, structure, age of buildings, and similar conditions must be taken into account in a rough manner in judging of the relative proportions spent for operation.

From all this follows the general principle that all percentage tables showing the distribution of expenses must be checked by reference to the average-cost tables and relative data.

Again, the percentage tables do not take into account the absence of any particular class of expenditure, as for special schools or vacation schools. As the total percentage for all kinds of expenses equals 100 in every instance, it follows that those cities which have a limited range of educational activity have a relatively larger percentage for the more common fields of expenditure. However, as the cities of

each group vary comparatively little in the scope of their work and as the amounts expended for the newer activities is relatively small, it follows that for practical purposes little or no account need be taken of the differences caused by this fact.

The standard of comparison.—If all cities had exactly the same conditions surrounding the conduct of public schools and if all cities chose to meet these conditions in just the same way, the distribution of expenses would be practically the same in all. But as conditions are not the same and as school administration varies more or less, what limit should be set up for determining whether a city is in accord with or is an exception to the prevailing practice? The answer to this question is that the city which lies in the middle of the list of percentages arranged in order of amount may be taken as best representing the group, and that all expense accounts can be fairly called regular or proportionate if they fall in the middle 50 per cent of the list of percentages. Such is the standard used in this study. It may be found desirable, however, in applying this standard to some cities to include some percentages that are on the margin. This is due partially to the simplicity of the methods used in determining the middle 50 per cent.

METHOD OF USING THE PERCENTAGE TABLES.

Comparison of percentages of cities in the same group for one kind of expense.—The relative position of any city as compared with other cities of the same group, in regard to the percentage of total school expenses incurred for any particular purpose may be quickly determined from the percentage tables in the following manner: After noting the percentage for the item in question together with the rank for the same, reference should then be made to the median and the upper and lower limits of the middle 50 per cent, as given at the top of the table, and their respective ranks. The next step is to determine the relation of the rank of the city to the ranks of the median and of the limits of the middle 50 per cent for the group to which the city belongs. If the digit indicating the rank of the city is less than the digit for the median of the group of cities, the city has a less percentage than the group of cities taken as a whole; and if the digit is more the percentage is higher. If the digit is less than that of the lower limit of the middle 50 per cent or more than the upper limit the expenses may be considered as exceptionally low or exceptionally high.

Comparison of distribution of expenses in one city with distribution of expenses in other cities of the same group.—This may be done in a cursory manner by extending the process just indicated to all items and forming a rough judgment as to the items in which the city is

low or high as compared with the group as a whole. The more accurate method consists in computing the differences between the percentages of the various classes of expenses for the city and the corresponding medians and arranging the excesses and deficiencies in separate lists. As those items that vary most from the medians are of greatest importance, and as variation from the median to the extent of the limits of the middle 50 per cent may be regarded as normal, the computation of differences in cases wherein the city's percentage is within the limits of the middle 50 per cent may be for all practical purposes neglected. The following table presents the result of such a computation for the city of Washington:

TABLE 2.—Differences between the various percentages that lie outside the middle 50 per cents, and the median percentages for the same items, for Washington, D. C

Rank	Num-ber of cases.	Deficiencies.	Amount of deficien-cies below median.	Rank.	Num-ber of cases.	Excesses.	Amount of excess above median.
3	11	Superintendent's office....	.23	9	11	Supervision of elementary schools.	1.62
2	13	Salaries of elementary school teachers.	7.41	10	13	Textbooks, stationery, and supplies of elementary schools.	.83
3	11	Repairs and replacements of equipment, elemen-tary schools.	.30	13	13	Fuel, elementary schools..	.75
3	12	Evening schools.....	1.04	12	12	Repairs to buildings, ele-mentary schools.	3.69
1	9	Truant officers and police..	.32	12	13	Salaries of secondary school teachers.	3.65
2	8	Payments to schools and institutions.	.47	8	8	Supervision of secondary schools.	.81
				10	10	Apparatus and manual training equipment, sec-ondary schools.	.33
				11	12	Repairs to buildings, secondary schools.	.27
				11	12	Rent.....	.86

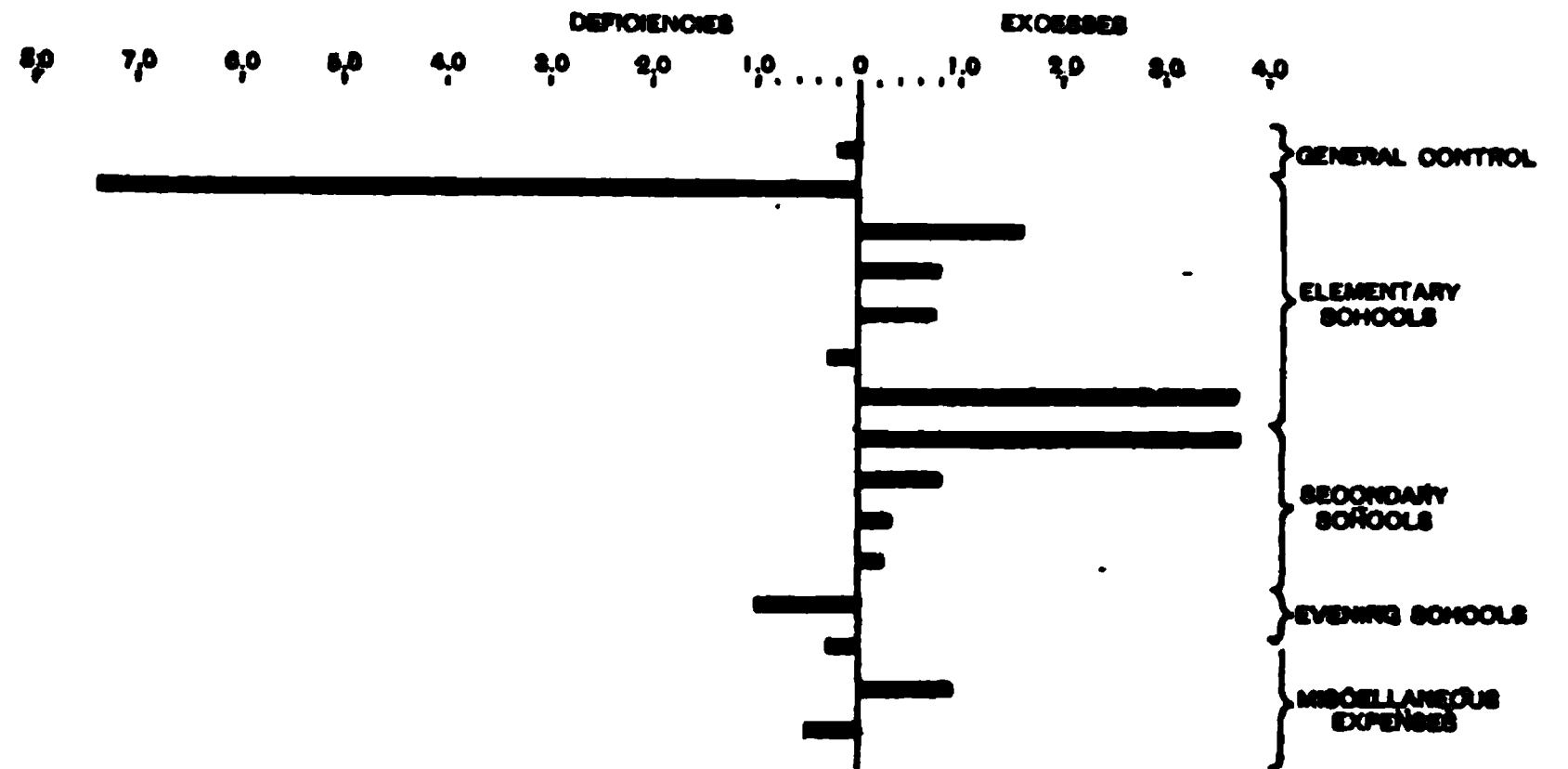


FIG. 1.—Differences between the various percentages of total expenses that lie outside the limits of the middle 50 per cent, and the median percentages for the same items, for Washington, D. C., based on Table 2.

Having arranged the facts in tabular form and illustrated them by a diagram similar to the above, the next step in a rational consideration of such facts is to determine in which cases such differences from the normal percentages are justifiable. For, as has been said, peculiar conditions in many cases may either justify large percentages or require the keeping of expenses within low amounts. In order that this process may be more clearly understood, a possible explanation of the variations in the case of Washington is here presented.

Let us start with the percentage in Table 2, that shows the largest deficiency—salaries of elementary school teachers. It has been said above that a high percentage for salaries of teachers would be justified if the average cost per pupil were near the normal. It is likewise true that a low percentage for salaries of teachers could not be considered as contrary to the best interests of the schools if the average costs for salaries were not below the normal. The average costs for elementary teachers in Washington is \$21.24 or 88 cents above the median, as shown in Table 29. The deficiency in percentage may not, therefore, be considered as unreasonable or contrary to the best interests of the schools. Such contrast of a relatively low percentage on the one hand and of a relatively high average cost on the other presents an interesting situation. Unusually large amounts must have been spent for other purposes than salaries of elementary teachers in order to make so high an average cost appear so small in the percentage tables or else the number of pupils per teacher must have been unusually small. As the attendance statistics show the number of pupils per teacher to be only slightly below the normal, it follows that certain other expenses must be unusually high. The excess side of Table 2 seems to bear out this conclusion.

Let us now turn to those items in which excesses appear in order to see whether they may be justified. Table 51 shows that the average cost per pupil for salaries of teachers in secondary schools lies next to the median cost. Table 31 shows that the enrollment in secondary schools is larger than that of any city in the group except Chicago. It would seem, therefore, as though the large percentage for this purpose was entirely justified. A larger percentage for supervision of elementary and secondary schools is unavoidable in Washington because of the duplication of positions and salaries in the schools for white and colored pupils. The school buildings of Washington are for the most part small buildings—the eight-room building being the most frequent. This naturally increases the cost of operation and maintenance. It would seem, however, since repairs and fuel for elementary school buildings cost more proportionately than in any other city, and since repairs of secondary school buildings cost more than in any other city but one, that economy could be brought about in these particulars. The same may be said with regard to rent, for Baltimore,

whose expenditures in this line are notorious, is the only city whose percentage exceeds Washington's. Coming back again to the deficiency side of the table, small appropriations for evening schools have led a number of teachers to give their services voluntarily, and small appropriations for truant officers have led to voluntary activities in this regard as well. The figures demonstrate the need of increased appropriations for these last two purposes in order that Washington may have an organization which approximates the standard of other cities.

Comparison of percentages of any one city with like percentages of all cities of 30,000 population and over included in this study.—This may be done in the same manner as indicated above for comparison with cities in the same group by using the medians and the limits of the middle 50 per cent for all cities as presented in the following table:

TABLE 3.—*Medians and limits of middle 50 per cents of percentages for entire list of 103 cities.*

	Medians.	Lower limit of middle 50 per cents.	Upper limit of middle 50 per cents.
TABLE 23.			
Column 1.....	0.875	0.480	1.510
2.....	.800	.250	1.400
3.....	1.870	1.315	2.590
4.....	.515	.200	.820
5.....	3.200	2.440	4.405
TABLE 24.			
Column 1.....	54.030	50.470	58.420
13.....	76.640	73.065	79.075
TABLE 25.			
Column 1.....	11.850	9.770	14.120
13.....	16.430	13.525	18.740
TABLE 27.			
Column 1.....	68.170	64.425	71.310
2.....	2.270	1.190	4.000
3.....	3.560	1.870	5.100
4.....	6.770	5.715	7.845
5.....	3.420	2.320	4.540
6.....	.420	.270	.630
7.....	.440	.250	.690
8.....	1.075	.690	2.080
9.....	.700	.350	1.250
10.....	.250	.080	.460
11.....	.790	.430	1.750
12.....	5.130	3.415	7.170
13.....	94.530	92.975	95.590
TABLE 28.			
Column 1.....	.190	.145	.340
2.....	.395	.250	.545
3.....	.320	.190	.400
4.....	.760	.410	.910
5.....	.310	.120	.550
6.....	.470	.225	.690
7.....	.160	.080	.290
8.....	.530	.270	1.300
9.....	.240	.100	.750
10.....	2.150	1.200	2.980

The accompanying tables of distribution of percentages for the most important items for the entire list of cities make possible a comparison which shows more definitely the relation of any city to every other city as regards one particular item of expense. For example, suppose we wish to ascertain the relative position of Baltimore as regards the per cent of total expenses devoted to salaries of elementary teachers. By referring to Table 24, column 1, we note that the per cent for this purpose is 58.5. Then, by consulting Table 4 below, we ascertain that this per cent lies in the eighth step; that there are 18 cities in all having per cents lying between 57.50 and 59.99; and that 66 cities have per cents lower than 57.50 and 17 cities have higher per cents than 59.99. These facts may be presented graphically in the same manner as a comparison of ratios of total expenses to population given in figure 8.

TABLE 4.—Distribution of percentages of total school expenses expended for various purposes.

A. FOR SUPERINTENDENT'S OFFICE. (See Table 23, column 3.)

Per cent of total school expenses.	Number of cities.	Per cent of total school expenses.	Number of cities.
Less than 0.50.....	2	2.50 to 2.99.....	13
0.50 to 0.99.....	14	3.00 to 3.49.....	9
1.00 to 1.49.....	15	3.50 to 3.99.....	4
1.50 to 1.99.....	25	4.00 to 4.50.....	3
2.00 to 2.49.....	17		

B. GENERAL CONTROL. (See Table 23, column 5.)

Less than 1.00.....	1	5.00 to 5.99.....	7
1.00 to 1.99.....	13	6.00 to 6.99.....	5
2.00 to 2.99.....	32	7.00 to 7.99.....	1
3.00 to 3.99.....	24	8.00 to 8.99.....	3
4.00 to 4.99.....	16	9.00 to 9.99.....	1

C. SALARIES OF ELEMENTARY TEACHERS. (See Table 24, column 1.)

Below 42.50.....	1	55.00 to 57.49.....	9
42.50 to 44.99.....	2	57.50 to 59.99.....	18
45.00 to 47.49.....	9	60.00 to 62.49.....	9
47.50 to 49.99.....	9	62.50 to 64.99.....	5
50.00 to 52.49.....	16	65.00 to 67.49.....	3
52.50 to 54.99.....	20	Above 67.50.....	2

D. TOTAL EXPENSES OF ELEMENTARY SCHOOLS. (See Table 24, column 13.)

Below 65.00.....	3	75.00 to 77.49.....	24
65.00 to 67.49.....	0	77.50 to 79.99.....	22
67.50 to 69.99.....	9	80.00 to 82.49.....	10
70.00 to 72.49.....	11	82.50 to 84.99.....	4
72.50 to 74.99.....	16	85.00 to 87.49.....	4

TABLE 4.—*Distribution of percentages of total school expenses expended for various purposes—Continued.*

E. SALARIES OF SECONDARY TEACHERS. (See Table 25, column 1.)

Per cent of total school expenses.	Number of cities.	Per cent of total school expenses.	Number of cities.
Below 6.00.....	2	12.00 to 13.99.....	20
6.00 to 7.99.....	7	14.00 to 15.99.....	17
8.00 to 9.99.....	18	16.00 to 17.99.....	9
10.00 to 11.99.....	26	18.00.....	3

F. TOTAL EXPENSES OF SECONDARY SCHOOLS. (See Table 25, column 13.)

7.50 to 9.99.....	8	17.50 to 19.99.....	21
10.00 to 12.49.....	14	20.00 to 22.49.....	8
12.50 to 14.99.....	22	22.50 to 24.99.....	7
15.00 to 17.49.....	21	25.00 to 27.50.....	2

G. SALARIES OF TEACHERS OF ALL SCHOOLS. (See Table 27, column 1.)

52.5 to 54.9.....	1	67.5 to 69.9.....	22
55.0 to 57.4.....	4	70.0 to 72.4.....	17
57.5 to 59.9.....	1	72.5 to 74.9.....	11
60.0 to 62.4.....	10	75.0 to 77.4.....	2
62.5 to 64.9.....	14	77.5 to 80.0.....	2
65.0 to 67.4.....	17	Above 80.0.....	2

H. SUPERVISION OF ALL SCHOOLS. (See Table 27, column 2.)

Less than 1.00.....	15	6.00 to 6.99.....	2
1.00 to 1.99.....	24	7.00 to 7.99.....	2
2.00 to 2.99.....	18	8.00 to 8.99.....	2
3.00 to 3.99.....	5	9.00 to 9.99.....	3
4.00 to 4.99.....	5	10.00 and over.....	5
5.00 to 5.99.....	4		

I. TEXT-BOOKS, STATIONERY, AND SCHOOL SUPPLIES OF ALL SCHOOLS. (See Table 27, column 3.)

Less than 1.00.....	9	5.00 to 5.99.....	14
1.00 to 1.99.....	17	6.00 to 6.99.....	8
2.00 to 2.99.....	17	7.00 to 7.99.....	5
3.00 to 3.99.....	17	8.00 to 8.99.....	1
4.00 to 4.99.....	12	9.00 to 9.99.....	1

J. FUEL FOR ALL SCHOOLS. (See Table 27, column 5.)

Less than 1.00.....	5	5.00 to 5.99.....	13
1.00 to 1.99.....	12	6.00 to 6.99.....	1
2.00 to 2.99.....	22	7.00 to 7.99.....	3
3.00 to 3.99.....	26	8.00 to 8.99.....	1
4.00 to 4.99.....	18		

K. INSTRUCTION, OPERATION, AND MAINTENANCE OF ALL SCHOOLS. (See Table 27, column 13.)

Below 84.00.....	1	92.00 to 93.99.....	28
84.00 to 85.99.....	2	94.00 to 95.99.....	46
86.00 to 87.99.....	1	96.00 to 97.99.....	14
88.00 to 89.99.....	3	98.00 to 100.00.....	1
90.00 to 91.99.....	7		

COMPARISON OF PERCENTAGES OF EXPENSES BETWEEN GROUPS OF CITIES.

It is not within the scope of this study to present elaborate comparisons between the various groups of cities respecting the differences in the percentages expended for various purposes, although the material for such comparison is furnished. It will doubtless prove of practical assistance, however, to administrators of public education to point out certain differences between the cities in this respect. For this purpose the medians alone may be taken, or the medians supplemented by the upper and lower limits of the middle 50 per cent.

The following conclusions relating to the differences in the distribution of the expenses in different sized cities seem to be established. The second group presents in many cases, however, an exception to the general rule.

(1) The larger the city the greater is the proportion of expenses incurred for—

(a) Salaries of elementary school teachers.

(b) Total cost of instruction, operation, and maintenance of elementary schools.

(c) Total cost of instruction, operation, and maintenance of all schools.

(2) The smaller the city the greater is the proportion of expenses incurred for—

(a) Superintendent's office.

(b) Total expense of general control.

(c) Supervisors of elementary schools.

(d) Salaries of teachers in secondary schools.

(e) Total cost of instruction, operation, and maintenance of secondary schools.

(f) Janitors, engineers, and firemen for elementary, secondary, and all schools.

(g) Fuel for elementary, secondary, and all schools.

(h) Repairs for elementary schools and all schools.

THE AVERAGE COSTS PER PUPIL FOR CERTAIN PRINCIPAL ITEMS OF EXPENSE.

This group contains two tables, 29 and 30. They correspond to the basal and percentage tables that deal with the expenses of elementary and secondary schools (Tables 17 and 18, 24 and 25). The tables are identical in form with the corresponding percentage tables. The average costs are based on enrollment.¹ While this is not the best

¹ The enrollment figures may be found in Table 32; also the closing date of the fiscal year for each city.

unit for measuring costs of school systems, it is the best that was available. It is not likely, however, that the relative costs are materially different from what they would be if a different attendance unit had been used. Average daily attendance has come to be generally recognized as the best unit, although it has its limitations. While the percentage tables emphasize the expenses of a school system as a whole and the proportion of the total devoted to the costs of the various objects of expenditures, the average cost tables emphasize the individual items of expense and the economical expenditure of the same. In the former each item exists as a part of a whole and the total of the percentages for each city equals 100 per cent. In the latter, each kind of expense is measured by itself.

Cities whose fiscal years ended before December, 1909, are not included in these tables for the reason that it did not seem proper in computing the average costs to divide the expenses for the year ended previous to December 1 by the enrollment for the school year 1908-9. Neither did it seem permissible to compare average cost of certain cities for 1908, which might have been obtained for the cities in question by using the enrollment figures for 1907-8 with the average cost of the cities for 1908-9. It therefore seemed necessary to omit these cities altogether.

Caution regarding the use of average cost tables.—One danger in using average costs deserves attention. If a city has a low average cost for any particular purpose as compared with other cities, the natural tendency is to say at once without reference to other items of expense that the amount expended for that purpose should be increased up to the normal amount for cities of that same class. Take the average amount per pupil expended for salaries of teachers in the elementary schools of Baltimore—\$13.75. The table shows that this is the lowest average cost for this purpose of all cities in the group. Those who are interested in this one item might very likely go no further in their study of school expenses, but would conclude at once that a clear case had been made out in favor of increasing the amount paid teachers in elementary schools as much as \$6.41 per pupil, in which circumstance the amount expended would be the median or average cost for the group.

But those who have the administration of schools in charge must look to all items of expense and must maintain a proper balance between them. The percentage tables furnish the data for ascertaining this balance and all consideration of the increase in the average cost of any item of expense must be considered in the light of its effect upon the correct balance between all items of expense as determined by an analysis of the percentage tables in accordance with the method suggested in the previous section. Continuing with the example referred to in the paragraph above, the percentage tables

tell us that the proportion of school moneys paid to the elementary teachers of Baltimore is much larger than the median amount for cities of the same group, and that 8 of the 13 cities devote a less percentage to this purpose.

This does not mean that the salaries should not be raised, for they should. The salary schedule for the elementary schools in Baltimore is among the lowest of all the largest cities in the country. But it does mean that there are other features of the operation and maintenance of the schools of Baltimore which must not be overlooked.

The items that should receive the greatest attention in such a balancing between expenditures are those which are lowest or highest comparatively in relation to the percentages of other cities. Baltimore percentages for supervision and for wages of janitors are the lowest for all the cities. Admitting that the salaries of elementary teachers are too low, is it in this item that the increased expenditures are needed most in order to bring about the maintenance of the best school system, and in order to recompense all who are serving it in a manner which most nearly approaches equitable amounts? As determined by the standard set by cities of the same class the answer is "No." Baltimore needs to spend more money for supervision before spending more money for teachers in order to have the best balanced system, and should in equity pay more to her janitors before increasing the salaries of her teachers. But the need for increasing the salaries of teachers from the absolute point of view is certainly clear; the figures merely prove that the items of supervision and wages of janitors need it more. The final conclusion of the whole matter is that Baltimore in order to put her school system on a plane of efficiency as high as other cities must increase her income for schools up to the point where normal expenditures may be made for all these purposes.

The conclusion of all this discussion is that action should never be based on a comparison of average costs alone, and that the percentage tables furnish a proper corrective. The ideal is to keep total average costs and percentages of total expenses as near the median as possible, and within the limit of the middle 50 per cent, making due allowance for local conditions which may rightfully cause extreme variations.

Average cost per pupil for school purposes also has very direct relations with the average cost per population (ratio of school expense to population) and the ratio of school expenses to expenses of the city as a whole.

METHOD OF USING THE AVERAGE-COST TABLES.

These average-cost tables may be used in the same way as the percentage tables. Data relating to average cost may be gathered and illustrated according to the methods presented in the discussion of the percentage item. The average cost in one city for any one

kind of expenses may be compared with the average costs of other cities in the same group by noting its relation to the median and the middle 50 per cent. (See p. 62.) A logical outcome of such a comparison is the estimation of the amount of increased resources that would be required to bring an expense in any city up to the median, or vice versa, of the amount that would have to be deducted in order to bring the expense down to the median. This may be done by obtaining the difference between the median average cost of the city and multiplying it by the number of pupils enrolled. (See Table 32.) As an example, let us continue the discussion of the average cost of salaries of elementary teachers in Baltimore. The average cost per pupil for this purpose was \$13.95, while the median average cost for the group was \$20.36. The difference, \$6.41, multiplied by the enrollment—76,500, approximately—gives close to \$500,000 as the additional amount required to bring Baltimore's expenses up to the median of the cities of Group I.

Comparison of all average costs may be carried out by the method shown on p. 17 for percentages of total expenses. The accompanying table, which brings together all the facts relating to average costs of the elementary schools of Baltimore, is given as an illustration of a variation of the method suggested in connection with percentages. The computations given have been performed roughly in order that the method might be the more clearly apprehended.

Table 5 gives a comparison of average costs of different kinds of expenses of elementary schools in Baltimore with median expenses of Group I, together with computation of amounts necessary to bring Baltimore's expenses up to the standard of other cities. The enrollment is figured as 76,500 in every item.¹

TABLE 5.—Comparison of school expenses of Baltimore with those of other cities.

Items.	Median average costs, all cities in Group I.	Baltimore's average costs.	Differences.	Increased expense required.
Total expenses.....	\$26. 54	\$18. 71	\$7. 83	\$600,000
Salaries, teachers'.....	20. 36	13. 95	6. 41	500,000
Supervision.....	.365	.04	.325	25,000
Janitors', engineers', etc., salaries.....	1. 73	1. 32	.41	34,000
Janitors' supplies and sundry expenses of maintenance and operation.....	.37	Trace.	.37	28,000
Libraries.....	.05	.00	.05	4,000
Apparatus and manual training equipment.....	.09	.03	.06	4,500
Repairs and replacement of equipment.....	.20	.14	.06	4,500

¹ This table was prepared by the author for the Commission appointed to study the system of education in the public schools of Baltimore and appeared in report upon p. 42.

Comparison of any average cost of any city with the average costs of all cities by use of the tables of frequencies and accompanying diagram may be made in the same way as in the case of percentages. (See p. 17.) Tables of frequencies for the most important average costs follow.

TABLE 6.—*Distribution of average costs, per pupil enrolled, of various expenses involved in the instruction, operation, and maintenance of elementary schools. (See Table 29.)*

A. SALARIES OF TEACHERS.

Average costs.	Cities of—				
	Group I.	Group II.	Group III.	Group IV.	All cities.
\$8-\$8.99				1	1
\$9-\$9.99					
\$10-\$10.99		1	1	2	4
\$11-\$11.99			1		1
\$12-\$12.99		1	2	3	6
\$13-\$13.99	1		4	2	7
\$14-\$14.99	1	1	5	3	10
\$15-\$15.99		1	2	1	4
\$16-\$16.99		2	4	1	7
\$17-\$17.99		2	1	2	5
\$18-\$18.99	1	3	1	1	6
\$19-\$19.99		2	2	1	5
\$20-\$20.99	4	1	1		6
\$21-\$21.99	2		2		4
\$22-\$22.99			1		1
\$23-\$23.99					
\$24-\$24.99		1			1
\$25-\$25.99					
\$26-\$27	1				1

B. SUPERVISION.

Below \$0.20	2	3	2	1	8
\$0.20-\$0.39	2	3	7	7	19
\$0.40-\$0.59	2	1	2	1	6
\$0.60-\$0.79		1	3	2	6
\$0.80-\$0.99					
\$1-\$1.19	1		2	1	4
\$1.20-\$1.39					
\$1.40-\$1.59		1		1	2
\$1.60-\$1.79					
\$1.80-\$1.99	1			1	2
\$2-\$2.19			1		1
\$2.20-\$2.39			1		1
\$2.40-\$2.59			1		1
\$2.60-\$2.79		1			1
\$2.80-\$2.99					
\$3-\$3.20			1		1

C. TEXTBOOKS, STATIONERY, AND GENERAL SUPPLIES.

Below \$0.20	1	2	1	3	7
\$0.20-\$0.39	1	1	1	1	4
\$0.40-\$0.59	1	3	5	3	12
\$0.60-\$0.79		4	3	1	8
\$0.80-\$0.99	4	2	2	2	10
\$1-\$1.19	1		7	2	10
\$1.20-\$1.39		1	1	2	4
\$1.40-\$1.59	1		2	2	5
\$1.60-\$1.79		1	2	1	4
\$1.80-\$1.99	1	1	1		3
\$2-\$2.20			1		1

D. SALARIES OF JANITORS, ENGINEERS, AND FIREMEN.

\$0.40-\$0.59			1		1
\$0.60-\$0.79					
\$0.80-\$0.99		2	2	3	7
\$1-\$1.19			4	1	5
\$1.20-\$1.39	3	2	2	1	8
\$1.40-\$1.59	1	2	5	1	9
\$1.60-\$1.79	2	2	4	2	10
\$1.80-\$1.99	1	1	4	3	9
\$2-\$2.19		3	2	6	11
\$2.20-\$2.39	1	1	2		4
\$2.40-\$2.59	1				1
\$2.60-\$2.79			1		1
\$2.80-\$2.99					
\$3-\$3.19		2			2
\$3.20-\$3.40	1				1

TABLE 6.—Distribution of average costs, per pupil enrolled, of various expenses involved in the instruction, operation, and maintenance of elementary schools—Continued.

E. FUEL.

Average costs.	Cities of—				
	Group I.	Group II.	Group III.	Group IV.	All cities.
Below \$0.20.....				1	1
\$0.20-\$0.39.....	2	4	3	1	10
\$0.40-\$0.59.....	1	2	4	3	10
\$0.60-\$0.79.....	4	1	6	2	13
\$0.80-\$0.99.....	2	1	8	3	14
\$1-\$1.19.....		2	3	1	6
\$1.20-\$1.39.....	1	3		2	6
\$1.40-\$1.59.....		2	1	2	5
\$1.60-\$1.80.....			2	1	3

F. REPAIRS OF BUILDINGS.

\$0.20-\$0.39.....			1	2	3
\$0.40-\$0.59.....		2	2	2	6
\$0.60-\$0.79.....	1	1	5	1	8
\$0.80-\$0.99.....	1	1	2		4
\$1-\$1.19.....	1	2	3		6
\$1.20-\$1.39.....	1	2	3	2	8
\$1.40-\$1.59.....	2		1	3	6
\$1.60-\$1.79.....	1		1	3	5
\$1.80-\$1.99.....		4	1	1	6
\$2-\$2.19.....			1	1	2
\$2.20-\$2.39.....			1		1
\$2.40-\$2.59.....	1		1		2
\$2.60-\$2.79.....			1		1
\$2.80-\$2.99.....					
\$3-\$3.19.....		3	1		4
\$3.20-\$3.39.....					
\$3.40-\$3.60.....	1				1

G. TOTAL EXPENSE OF INSTRUCTION, OPERATION, AND MAINTENANCE OF ELEMENTARY SCHOOLS.

\$11-\$11.99.....				1	1
\$12-\$12.99.....					
\$13-\$13.99.....		1	1		2
\$14-\$14.99.....				1	1
\$15-\$15.99.....		1	1		2
\$16-\$16.99.....			1	2	3
\$17-\$17.99.....					
\$18-\$18.99.....	1	1	3	3	8
\$19-\$19.99.....			2	1	3
\$20-\$20.99.....			2		2
\$21-\$21.99.....		1	5	1	7
\$22-\$22.99.....	1	1	4	3	9
\$23-\$23.99.....	1	3		1	5
\$24-\$24.99.....		1		1	2
\$25-\$25.99.....	1	2	2	2	7
\$26-\$26.99.....	2	1	3	1	7
\$27-\$27.99.....	1				1
\$28-\$28.99.....	1	1			2
\$29-\$29.99.....		1	2		3
\$30-\$30.99.....			1		1
\$31-\$31.99.....	1	1			2
\$32-\$32.99.....					
\$33-\$34.....	1				1

TABLE 7.—*Distribution of average costs, per pupil enrolled, of various expenses involved in the instruction, operation, and maintenance of secondary schools. (See Table 30.)*

A. SALARIES OF TEACHERS.

Average costs.	Cities of—				
	Group I.	Group II.	Group III.	Group IV.	All cities.
\$20-\$22.49.....		1	2	2	5
\$22.50-\$24.99.....		2	1	2	5
\$25-\$27.49.....				1	1
\$27.50-\$29.99.....			2	5	7
\$30-\$32.49.....	1	1		2	4
\$32.50-\$34.99.....		2	6	2	10
\$35-\$37.49.....	1	3	5		9
\$37.50-\$39.99.....		1	5		6
\$40-\$42.49.....		1		1	2
\$42.50-\$44.99.....	1	1	1		3
\$45-\$47.49.....		2	3		5
\$47.50-\$49.99.....	2				2
\$50-\$52.49.....				1	1
\$52.50-\$54.99.....	2			1	3
\$55-\$57.49.....	1				1
\$57.50-\$59.99.....					
\$60-\$62.49.....		1			1
\$62.50-\$64.99.....	1				1
\$65-\$67.49.....	1		1		2
\$67.50-\$70.00.....			1		1

B. TEXTBOOKS, STATIONERY, AND GENERAL SCHOOL SUPPLIES.

\$0.49.....	1	5	1	3	10
\$0.50-\$0.99.....	1		3	2	6
\$1-\$1.49.....	1		2		3
\$1.50-\$1.99.....		1	2	3	6
\$2-\$2.49.....	1	2	1	3	7
\$2.50-\$2.99.....	2	2	2	1	7
\$3-\$3.49.....	1	1			2
\$3.50-\$3.99.....	1	1	4	2	8
\$4-\$4.49.....		1	3		4
\$4.50-\$4.99.....			1		1
\$5-\$5.49.....		1	1		2
\$5.50-\$5.99.....	1		1	2	4
\$6 and over.....	1		3		4

C. SALARIES OF JANITORS, ENGINEERS, AND FIREMEN.

\$1-\$1.24.....		1	2		3
\$1.25-\$1.49.....		1		3	4
\$1.50-\$1.74.....			2	1	3
\$1.75-\$1.99.....		2	2	1	5
\$2-\$2.24.....			2	3	5
\$2.25-\$2.49.....	1	2	2	1	6
\$2.50-\$2.74.....	2	1	2	1	6
\$2.75-\$2.99.....	2	1	4		7
\$3-\$3.24.....		2	2	2	6
\$3.25-\$3.49.....			1		1
\$3.50-\$3.74.....		1	1		2
\$3.75-\$3.99.....	1	1	1		3
\$4-\$4.24.....	1	1	2		6
\$4.25-\$4.49.....			1	2	3
\$4.50-\$4.74.....					
\$4.75-\$4.99.....	1				1
\$5-\$5.24.....			1		1
\$5.25-\$5.49.....	1	1			2
\$5.50-\$5.74.....		1			1
\$5.75-\$5.99.....					
\$6 and over.....	1		2	1	4

TABLE 7.—Distribution of average costs, per pupil enrolled, of various expenses involved in the instruction, operation, and maintenance of secondary schools—Continued.

D. FUEL.

Average costs.	Cities of—				
	Group I.	Group II.	Group III.	Group IV.	All cities.
Below \$0.20.....		1			1
\$0.20-\$0.39.....	1	1	1		3
\$0.40-\$0.59.....		1	3	2	6
\$0.60-\$0.79.....	1	1	2		4
\$0.80-\$0.99.....	2	1	2	1	6
\$1-\$1.19.....	1	2	2	2	7
\$1.20-\$1.39.....		2	6	1	9
\$1.40-\$1.59.....	2	1	3	2	8
\$1.60-\$1.79.....	2		2	2	6
\$1.80-\$1.99.....		1	3	1	5
\$2-\$2.19.....		1	1	1	3
\$2.20-\$2.39.....	1	1	1	1	4
\$2.40-\$2.59.....			1	1	2
\$2.60-\$2.79.....					
\$2.80-\$2.99.....					
\$3 and over.....		1		2	3

E. REPAIRS TO BUILDINGS.

\$0.25-\$0.49.....			2	1	3
\$0.50-\$0.74.....		1	3	1	5
\$0.75-\$0.99.....		1	1	1	3
\$1-\$1.24.....	1	1	2	3	7
\$1.25-\$1.49.....		1	4		5
\$1.50-\$1.74.....		2		2	4
\$1.75-\$1.99.....		2			2
\$2-\$2.24.....	1	1	3	1	6
\$2.25-\$2.49.....	1	1	1	2	5
\$2.50-\$2.74.....	1	2	1	1	5
\$2.75-\$2.99.....	1				1
\$3-\$3.24.....	1				1
\$3.25-\$3.49.....	1				1
\$3.50-\$3.74.....	1		1		2
\$3.75-\$3.99.....					
\$4-\$4.24.....			1		1
\$4.25-\$4.49.....					
\$4.50-\$4.74.....	1				1
\$4.75-\$4.99.....		1	1		2
\$5 and over.....			3	1	4

F. TOTAL EXPENSE OF INSTRUCTION, OPERATION, AND MAINTENANCE.

\$25-\$29.99.....		2	2	3	7
\$30-\$34.99.....		1			1
\$35-\$39.99.....		1	1	6	8
\$40-\$44.99.....		2	7	3	12
\$45-\$49.99.....	2	2	5	2	11
\$50-\$54.99.....		3	4		7
\$55-\$59.99.....	2	1	2	1	6
\$60-\$64.99.....	2	1	2		5
\$65-\$69.99.....	1	1	1	2	5
\$70-\$79.99.....	1	1			2
\$80-\$89.99.....	2		1		3
\$90-\$100.....			2		2

The following conclusions are based on comparisons of the average costs of the same kinds of expenses in the different groups of cities:

1. The larger the city the greater the average cost per pupil enrolled of—
 - (a) Total cost of instruction, operation, and maintenance of elementary schools.
 - (b) Salaries of elementary-school teachers.
 - (c) Janitors of elementary schools.
 - (d) Repairs of elementary schools.
 - (e) Total cost of instruction, operation, and maintenance of secondary schools.
 - (f) Salaries of secondary-school teachers.
 - (g) Janitors of secondary schools.
 - (h) Repairs of secondary schools.
2. There is no apparent tendency in the variation of the average cost of—
 - (a) Textbooks, stationery, and general school supplies of elementary schools.
 - (b) Fuel of elementary and secondary schools.

TOTAL SCHOOL EXPENSES AS COMPARED WITH POPULATION, TOTAL CITY EXPENSES, AND EXPENSES OF POLICE DEPARTMENT.

Table 31 gives a comparison of the total expenses of schools (1) with the population, (2) with the total city expenses, (3) with the expenses of the police department.

The total city expenses and the expenses of the police department have been obtained from Table 4 of Special Reports of the Bureau of the Census: Statistics of cities, 1908 (pp. 116–163). The population figures were obtained from the same source (pp. 343–345). The expenses of schools are the same as in the first column of Table 16.

Comparison of cities of the same group.—Each of the three items expressing comparative values—expenses of schools per capita of population,¹ ratio of total school expenses to city expenses, and ratio of total school expenses to expenses of the police department—may be used in the same way in making comparisons. A rough comparison may be made by noting their respective ranks and the relation of the rank of each to the ranks of the median and of the limits of the middle 50 per cent. This comparison may be made more accurately and more impressively by the preparation of diagrams. Baltimore is again taken as the city with which to illustrate this method of comparison.

¹ Largely for the sake of convenience the cost per capita, expressed as an abstract number, is hereafter referred to also as the ratio of school expenses to population.

The revised estimates of population in June, 1908, as made by the Census Office, have been used in making this computation. This estimate for Baltimore is 549,017.

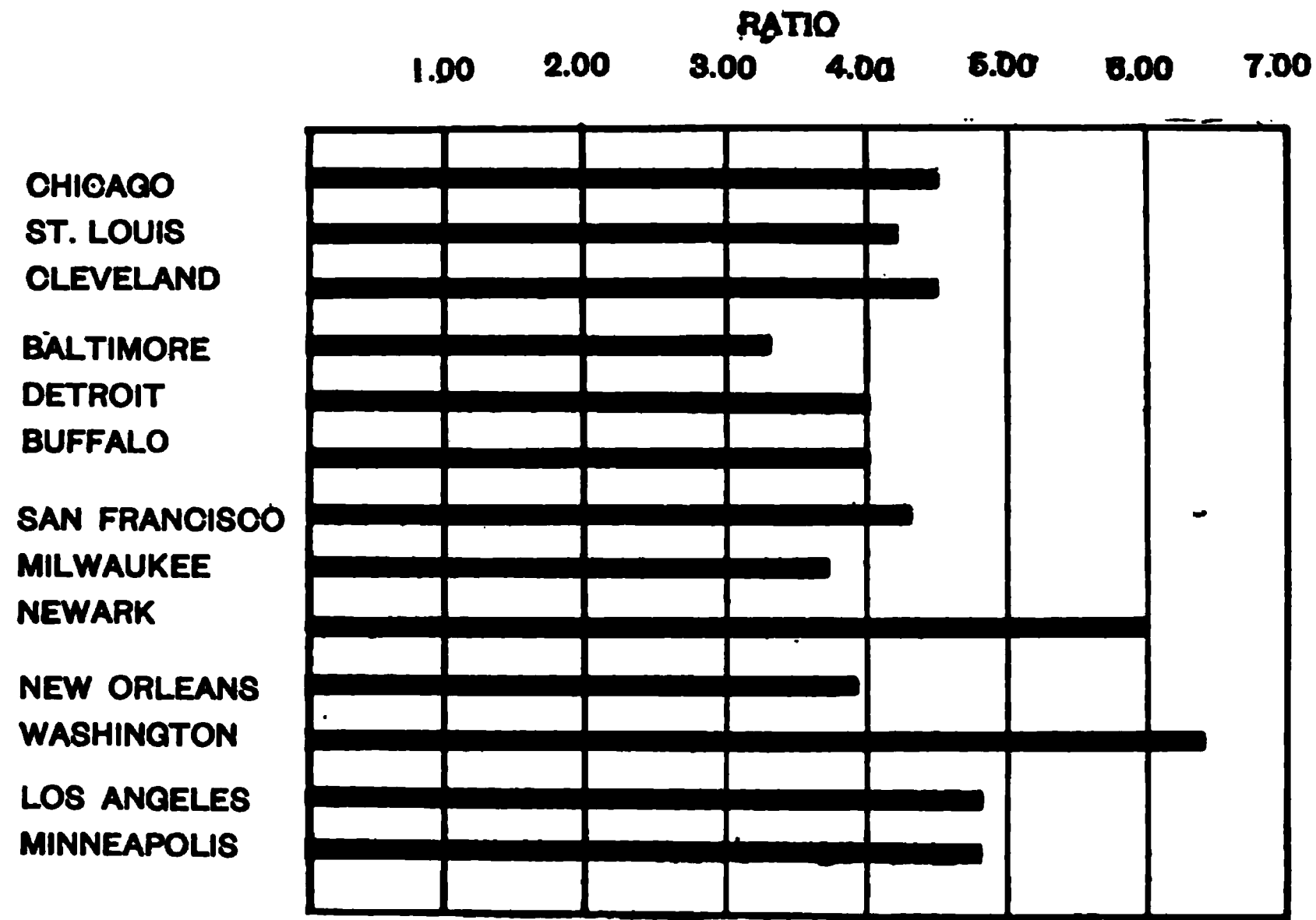


FIG. 2.—Ratio of school expenses to population in cities of Group I.

These ratios may also be read as cost per capita of population. For example, the cost per capita of population of all school expenses in Detroit was \$4.¹ A comparison of the relative amounts of school expenses and of total city expenses in these 13 cities shows that Detroit expended for school purposes a larger percentage of the total city expenses than 8 cities and a smaller percentage than 4. The median or average percentage was 25.9; Detroit's percentage was 28. In other words, in the average, or normal city, 25.9 cents out of every dollar expended for all municipal purposes went for schools, while in Detroit 28 cents were so expended. The following diagram presents these facts:

These ratios may also be read as the number of cents in each dollar of city expenses that was expended for schools. For example, San Francisco expended 20 cents out of every dollar of city expenses upon its schools.¹ A comparison of expenses for schools and for police in these 13 cities shows that 1 city spent a smaller relative amount for schools than St. Louis, while 11 cities were relatively more liberal. For every dollar spent for police, St. Louis spent only \$1.41 for

¹ Figures 2, 3, and 4 were prepared for the report of the Commission appointed to study the system of education in the public schools of Baltimore, pp. 34-36.

schools, while the median or average city spent \$2.12. The following diagram presents the facts:

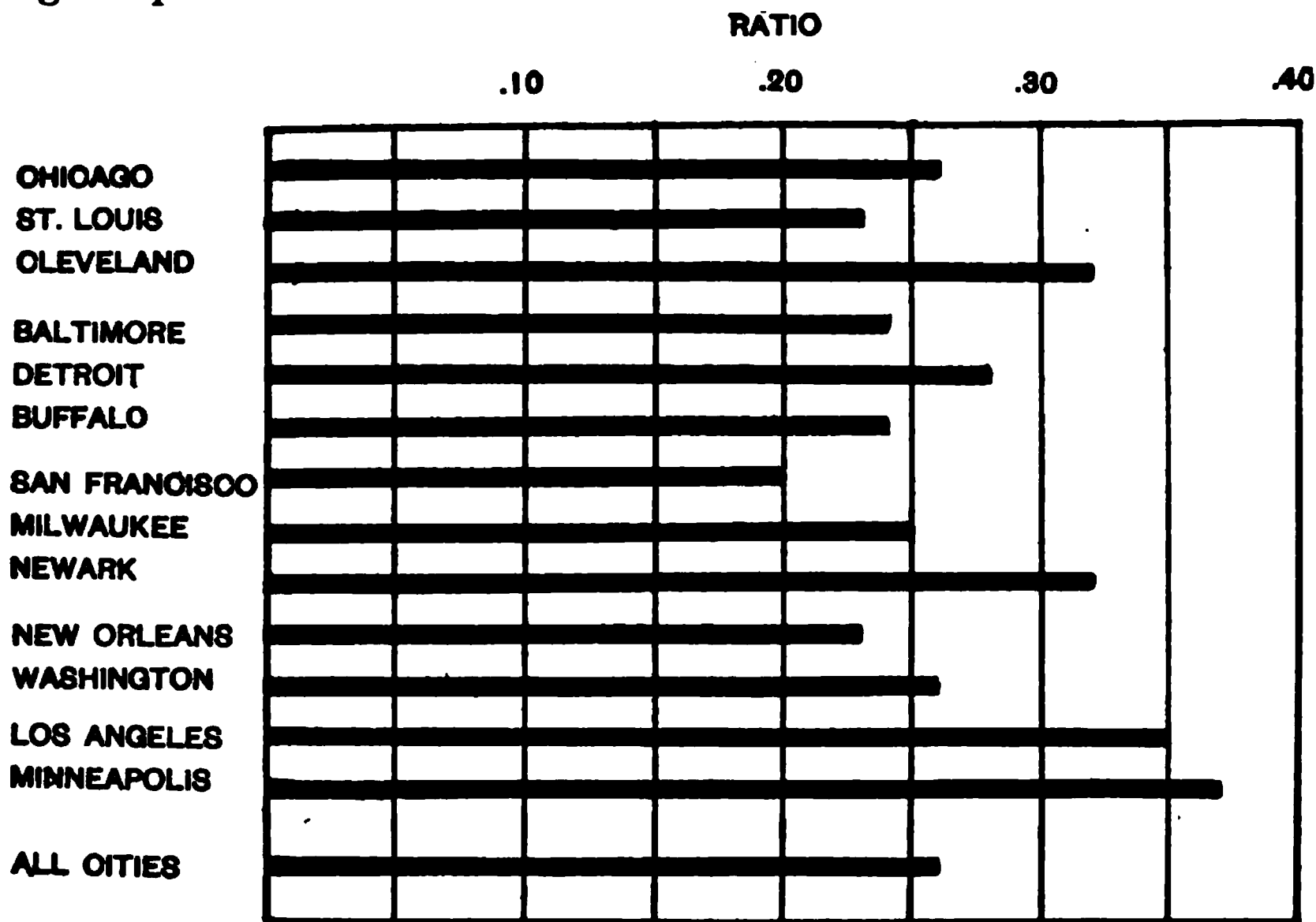


Fig. 3.—Ratio of school expenses to total city expenses in cities of Group I.

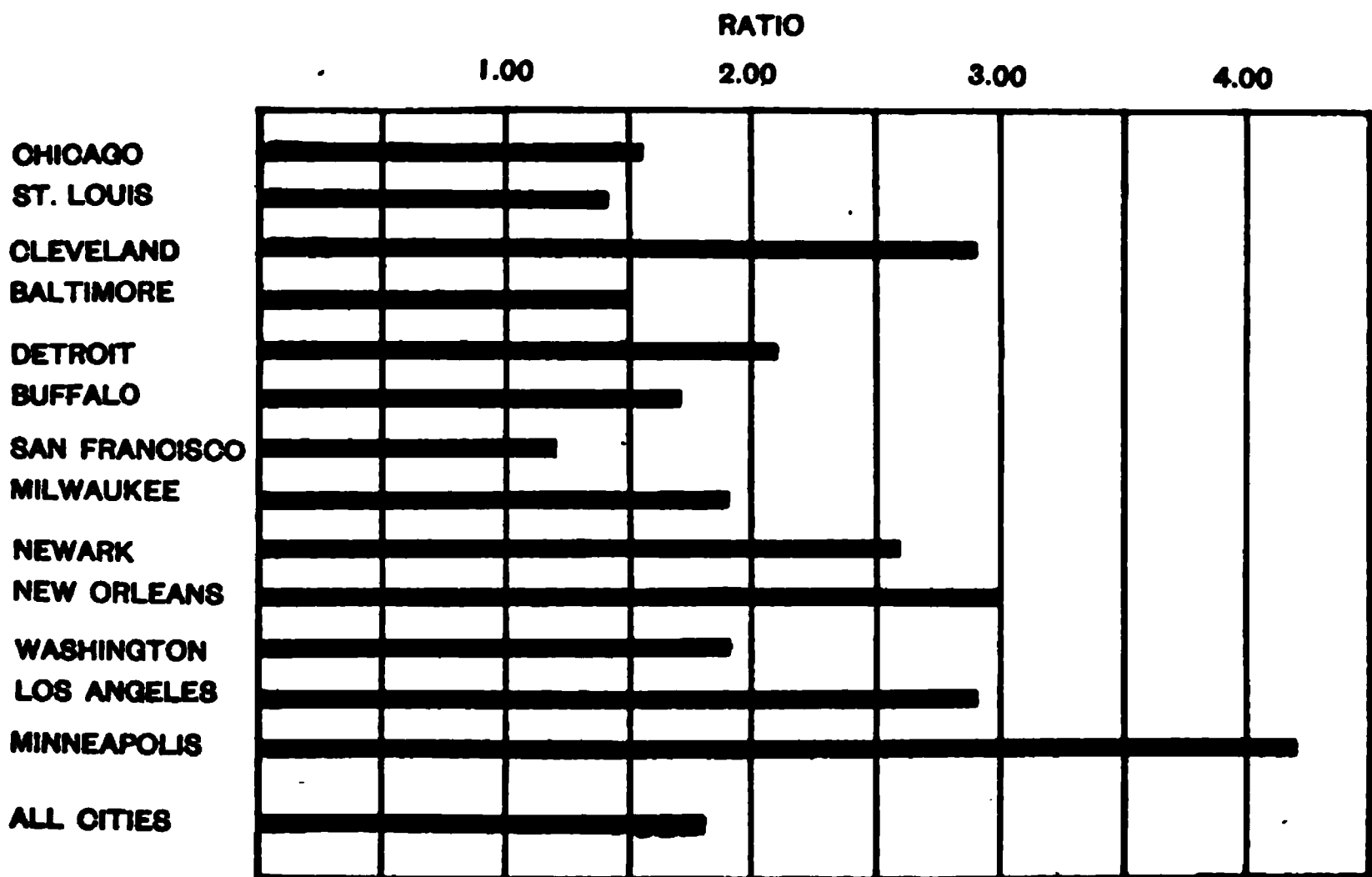


Fig. 4.—Ratio of school expenses to expenses for police in cities of Group I.

These ratios may be read as number of dollars spent for schools for each dollar that was spent for police. For example, Baltimore expended one dollar and fifty cents upon its schools for every dollar spent for police.¹

¹ Figures 2, 3, and 4 were prepared for the report of the Commission appointed to study the system of education in the public schools of Baltimore, pp. 34-36.

In order that a comparison of any city with those of the same group or with all may be facilitated the following tables of frequencies have been prepared:

TABLE 8.—*Distribution of ratios of total school expenses to population. (See Table 31.)*

Ratio.	Number of cities.				
	Group I.	Group II.	Group III.	Group IV.	Total.
1.50 to 1.99.....			3		3
2.00 to 2.49.....			2	2	4
2.50 to 2.99.....	1	3	3	5	12
3.00 to 3.49.....	1		10	4	15
3.50 to 3.99.....	2	4	8	6	20
4.00 to 4.49.....	3	7	6	6	22
4.50 to 4.99.....	4	3	5	2	14
5.00 to 5.49.....		2	1	3	6
5.50 to 5.99.....		1	2		3
6.00 to 6.49.....	2		2		4

TABLE 9.—*Distribution of ratios of school expenses to total city expenses. (See Table 31.)*

Ratio.	Number of cities.				
	Group I.	Group II.	Group III.	Group IV.	Total.
.15 to .199.....			3	1	4
.20 to .249.....	5	2	2	2	11
.25 to .299.....	4	2	3	1	10
.30 to .349.....	2	8	11	7	28
.35 to .399.....	2	4	6	7	19
.40 to .449.....		3	10	4	17
.50 to .549.....		1	7	3	11
.55 to .599.....				3	3

TABLE 10.—*Distribution of ratios of school expenses to expenses for police. (See Table 31.)*

Ratio.	Number of cities.				
	Group I.	Group II.	Group III.	Group IV.	Total.
1.00 to 1.49.....	3		4	1	8
1.50 to 1.99.....	3	3		2	8
2.00 to 2.49.....	2	3	6	2	13
2.50 to 2.99.....	3	4	6	1	14
3.00 to 3.49.....	1	5	6	4	16
3.50 to 3.99.....		1	6	2	9
4.00 to 4.49.....	1	1	4	3	9
4.50 to 4.99.....		1	4	3	8
5.00 to 5.49.....			2	3	5
5.50 to 5.99.....			1	1	2
6.00 to 6.49.....		1	1	4	6
6.50 to 6.99.....					
7.00 to 7.49.....		1	2		3
7.50 to 7.99.....				1	1
8.00 to 8.49.....				1	1

The following diagrams represent graphically the facts in the above tables relating to (1) ratio of school expenses to population in all cities; (2) ratio of school expenses to total city expenses in all cities; (3) ratio of school expenses to expenses for police in all cities. The lines are drawn to represent the middle point in each step of the

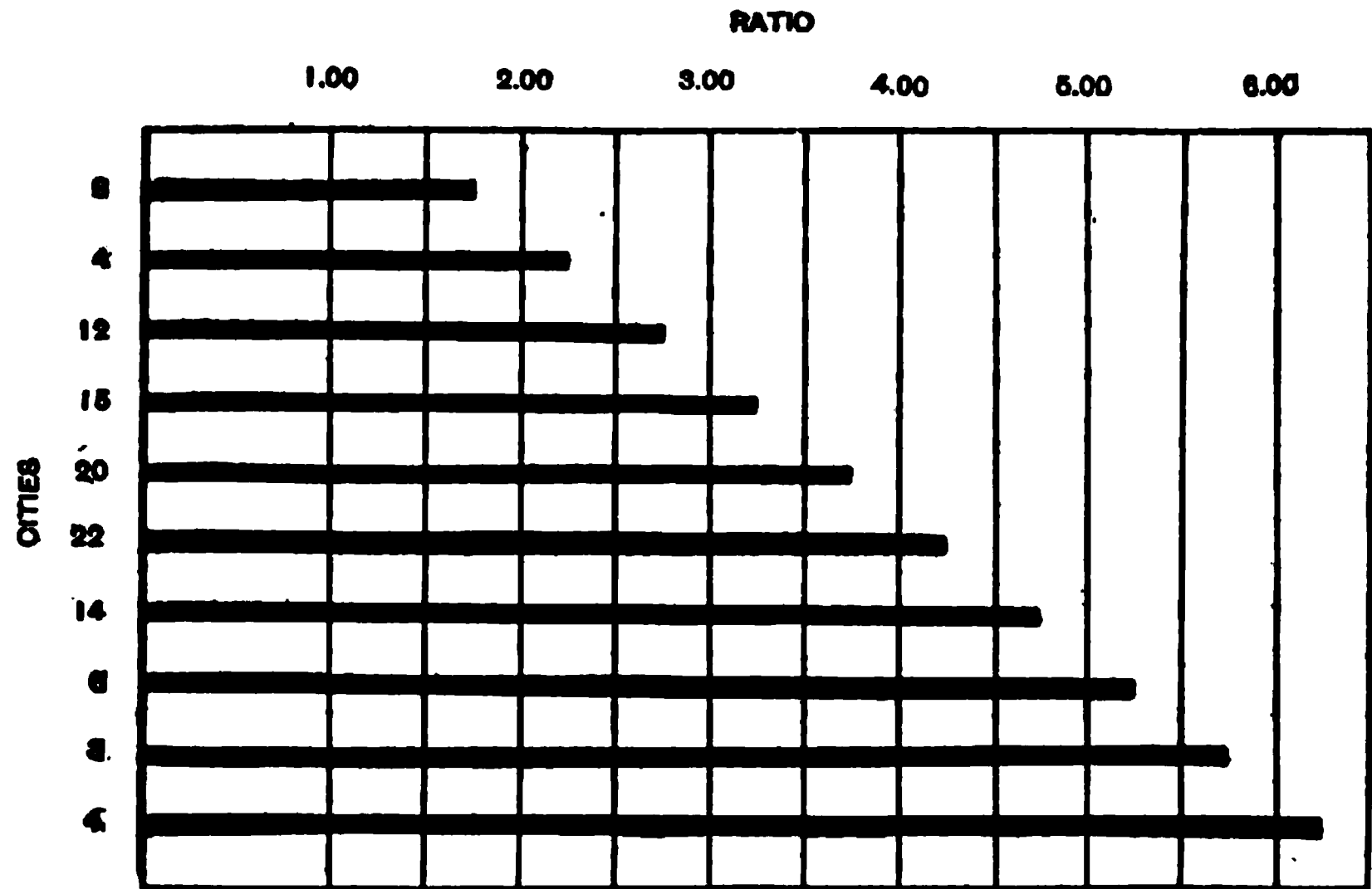


FIG. 5.—Frequencies of various ratios of school expenses to population in all cities. These ratios may be read as cost per capita of population.

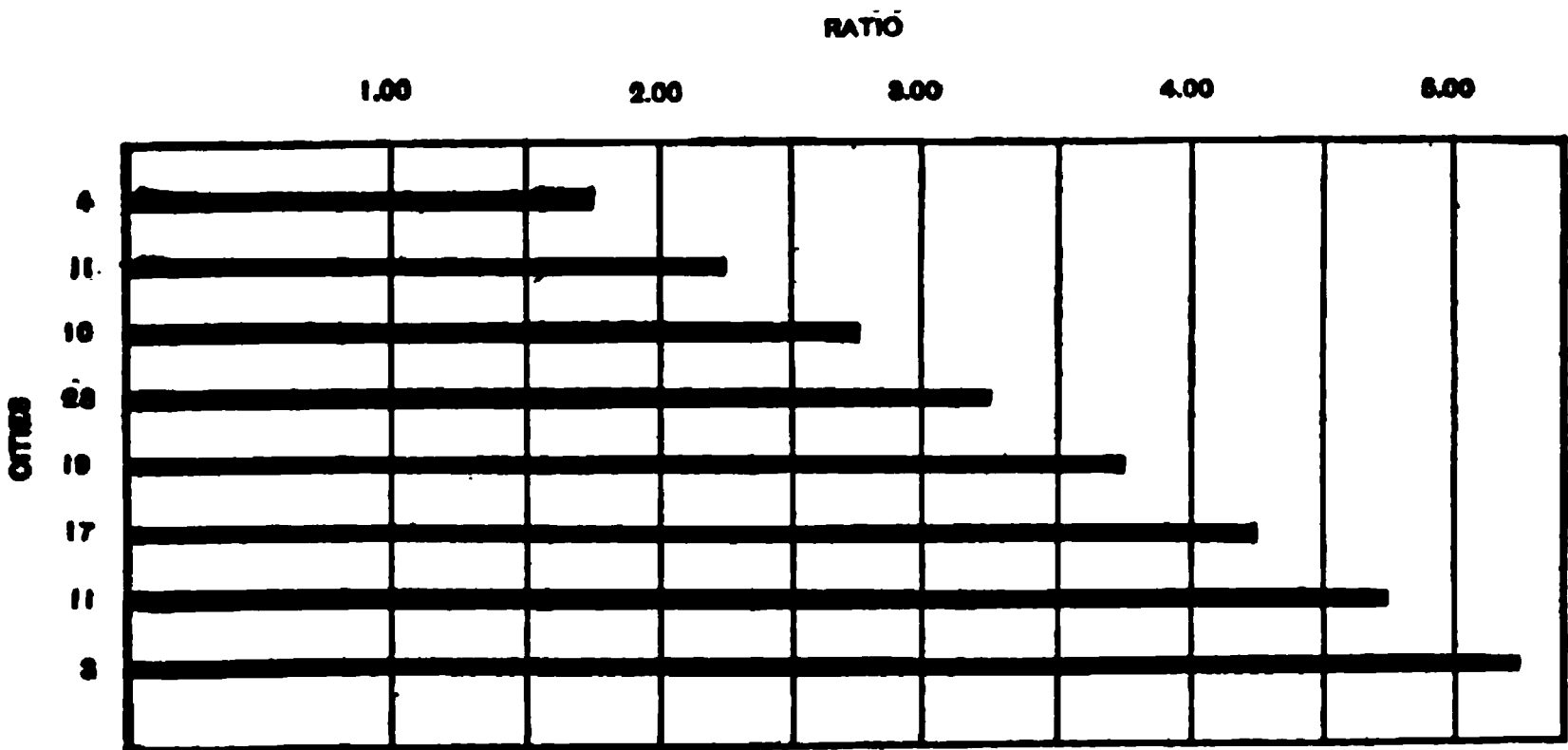


FIG. 6.—Frequencies of various ratios of school expenses to total city expenses in all cities. These ratios may be read as the number of cents in each dollar of city expenses there was expended for schools.

list of ratios. Thus, in the first table mentioned the first line is drawn to represent \$1.75 as the middle point between \$1.50 and \$1.99.

EXPENSES OF CITY SCHOOL SYSTEMS.

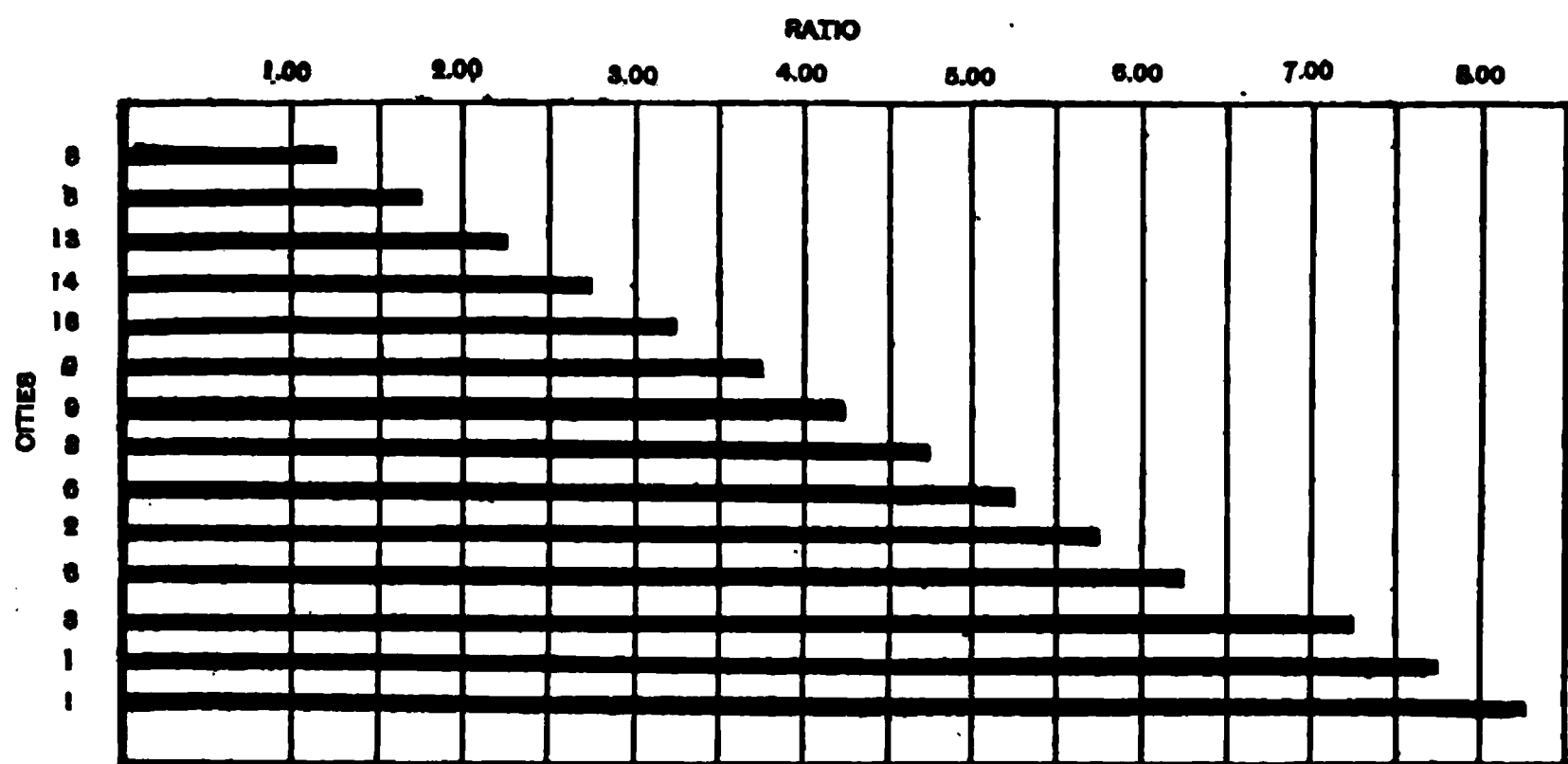


FIG. 7.—Frequencies of various ratios of school expenses to expenses for police in all cities. These ratios may be read as the number of dollars spent for schools for each dollar spent for police.

By the use of Figure 8 the place of any city in such diagrams as are given above can be readily found. As the lines represent the middle amounts in each step of the distribution in the table of frequencies, it is well to give the exact amount for the city in question.

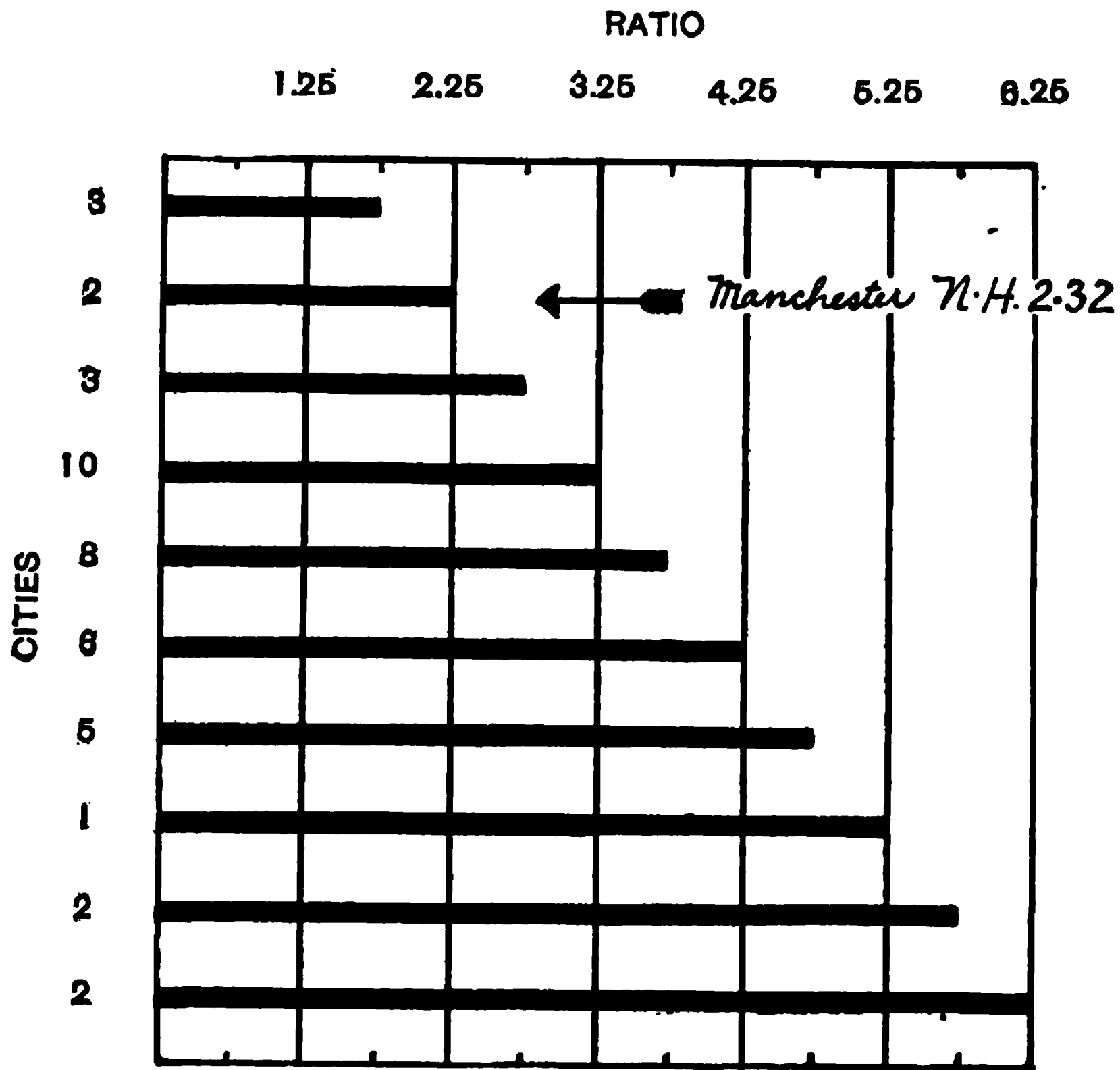


FIG. 8.—Ratio of total school expenses to population of cities in Group III and relation of ratio of Manchester, N. H., to those of all other ratios.

A comparison of the three ratios for each of the various cities reveals a tendency of cities to maintain the same relationship to other cities in all three respects.

The two tables given below (Tables 11 and 12) bring together certain facts relating to the cities at the lower and upper ends of the distribution of the three ratios in Table 31. The first table assembles the facts relating to the ranks and the second is based upon it, giving instead of the ranks the location of each city as regards the quartiles in the distribution.

TABLE 11.—Showing for those cities which are included in the lowest and highest quartiles of the distribution of ratios of school expenses to population (cost per capita) in each group, the rank of the same cities as regards ratio of school expenses to total city expenses, and ratio of school expenses to expenses for police. (See Table 31.)

Cities in lowest quartile.	Rank.			Cities in highest quartile.	Rank.		
	Ratio of school ex-penses to popula-tion.	Ratio of school ex-penses to total city ex-penses.	Ratio of school ex-penses to ex-penses for police.		Ratio of school ex-penses to popula-tion.	Ratio of school ex-penses to total city ex-penses.	Ratio of school ex-penses to ex-penses for police.
<i>Group I—13 cities.</i>				<i>Group I—13 cities.</i>			
New Orleans, La.....	1	2	12	Washington, D. C.....	13	8	6
Baltimore, Md.....	2	5	3	Newark, N. J.....	12	10	9
Milwaukee, Wis.....	3	6	8	Minneapolis, Minn.....	11	13	13
<i>Group II—20 cities.</i>				<i>Group II—20 cities.</i>			
Memphis, Tenn.....	1	1	2	Spokane, Wash.....	20	19	20
Nashville, Tenn.....	2	5	7	Oakland, Cal.....	19	10	14
Birmingham, Ala.....	3	2	4	Grand Rapids, Mich.....	18	18	18
St. Paul, Minn.....	4	7	8	Cambridge, Mass.....	17	9	11
Albany, N. Y.....	5	3	4	Omaha, Nebr.....	16	13	17
<i>Group III—43 cities.</i>				<i>Group III—43 cities.</i>			
Jacksonville, Fla.....	1	3	2	Springfield, Mass.....	40	20	30
Charleston, S. C.....	2	1	3	Des Moines, Iowa.....	39	38	39
Savannah, Ga.....	3	5	1	Bayonne, N. J.....	38	37	26
Norfolk, Va.....	4	2	4	Hartford, Conn.....	37	15	20
Manchester, N. H.....	5	4	14	Tacoma, Wash.....	36	22	34
Covington, Ky.....	6	16	10	Saginaw, Mich.....	35	35	37
Wilmington, Del.....	7	14	6	Brocton, Mass.....	34	19	25
Dallas, Tex.....	8	11	18	Camden, N. J.....	33	29	16
Reading, Pa.....	9	24	31	Holyoke, Mass.....	32	13	23
Elizabeth, N. J.....	10	18	7	Portland, Me.....	31	6	16
Wichita, Kans.....	11	28	33				
<i>Group IV—28 cities.</i>				<i>Group IV—28 cities.</i>			
Chattanooga, Tenn.....	1	2	1	Davenport, Iowa.....	27	24	15
Knoxville, Tenn.....	2	1	4	Malden, Mass.....	27	17	17
Newport, Ky.....	3	13	5	Sacramento, Cal.....	26	19	10
Woonsocket, R. I.....	4	4	6	Topeka, Kans.....	25	27	28
Dubuque, Iowa.....	5	8	10	Pueblo, Colo.....	24	5	12
Little Rock, Ark.....	6	16	3	Sioux City, Iowa.....	23	24	20
Lancaster, Pa.....	7	20	16	Haverhill, Mass.....	22	7	15

TABLE 12.—*Showing for those cities which lie in the lowest and highest quartiles in the distribution of ratio of school expenses to population (cost per capita) in each group, the number of cases in which their ratios of school expenses to city expenses and of school expenses to expenses of police fall in each of the four quartiles of those distributions. (See Table 31.)*

I. CITIES WHOSE COSTS PER CAPITA LIE IN THE LOWEST OR FIRST QUARTILE OF RATIO OF SCHOOL EXPENSES TO POPULATION.

Cities of—	Num-ber of cities.	Ratio of school expenses to total city expenses.				Ratio of school expenses to police expenses.			
		First quar-ter.	Second quar-ter.	Third quar-ter.	Fourth quar-ter.	First quar-ter.	Second quar-ter.	Third quar-ter.	Fourth quar-ter.
Group I.....	3	1	2	.....	.....	1	.....	2	.....
Group II.....	5	4	1	.....	.....	3	2	.....	.....
Group III.....	11	6	3	2	.....	7	2	2	.....
Group IV.....	7	3	2	2	.....	5	1	1	.....
Total.....	26	14	8	4	.....	16	5	5	.....

II. CITIES WHOSE COSTS PER CAPITA LIE IN THE HIGHEST OR FOURTH QUARTILE OF RATIO OF SCHOOL EXPENSES TO POPULATION.

Group I.....	3	.....	1	1	1	.....	1	1	1
Group II.....	5	.....	.....	2	3	.....	.....	2	3
Group III.....	10	1	4	2	3	.....	3	4	3
Group IV.....	7	2	.....	2	3	.....	2	4	1
Total.....	25	3	5	7	10	.....	6	11	8

These tables indicate that cities which give low amounts per capita to schools do not generally reduce correspondingly the costs of their municipal governments in general and of their police departments so that the ratio of school expenses to these expenses will be maintained near the median, and that cities which pay large amounts per capita for schools do not as a rule maintain their city governments at such a high rate of expense as to bring the ratio of school expenses to total city expenses and of school expenses to police down near the median. In other words, expenses for schools and other city expenses are largely dissociated. Those considerations which prompt a cutting down in school expenses do not produce reductions in city expenses, and increases in school expenses do not cause augmentation in amounts spent for other purposes.

This may be due in part to the separation in many cities of the organs of local government for education and for other civil purposes. While the problem can not be entered upon in this study there seems to be a tendency in favor of cities with departments of education making low appropriations for school purposes without paring down other expenses; while those cities in which the schools are under the control of independent districts spend relatively large amounts for educational purposes. The wisdom or unwisdom of either form of administration can not be discussed here. It may be said in passing, however, that one of the most important considerations in

this particular matter is the efficiency of the schools in the various cities under the two forms of organization.

Comparison of percentages by groups.—The following conclusions are apparent from an inspection of the median and the limits of the middle 50 per cent of each group:

- 1. The larger the city the greater is the expense per capita of population for maintaining schools.
- 2. The larger the city the smaller is the ratio of school expenses to total city expenses.
- 3. The larger the city the smaller is the ratio of school expenses to expenses for the police department.

From the above it may be drawn that, while expenses for schools per capita of population increase with the size of the cities, they do not as a rule increase so much as other city expenses.

TABLE 13.—*Showing for each ratio the 5 cities in the entire list of 103 cities that stand lowest and the 5 that stand highest, together with the amounts of the ratios. (See Table 31.)*

RATIO OF SCHOOL EXPENSES TO POPULATION.

Lowest ratios.		Highest ratios.	
Cities.	Ratios.	Cities.	Ratios.
Jacksonville, Fla.....	1.74	Washington, D. C.....	6.40
Charleston, S. C.....	1.78	Springfield, Mass.....	6.09
Savannah, Ga.....	1.94	Newark, N. J.....	6.02
Chattanooga, Tenn.....	2.04	Des Moines, Iowa.....	6.01
Norfolk, Va.....	2.21	Spokane, Wash.....	5.84

RATIO OF SCHOOL EXPENSES TO TOTAL CITY EXPENSES.

Savannah, Ga.....	0.150	Joplin, Mo.....	0.530
Charleston, S. C.....	.177	Topeka, Kans.....	.530
Norfolk, Va.....	.192	York, Pa.....	.509
Jacksonville, Fla.....	.199	Scranton, Pa.....	.498
San Francisco, Cal.....	.201	New Castle, Pa.....	.492

RATIO OF SCHOOL EXPENSES TO EXPENSES FOR POLICE.

Savannah, Ga.....	1.04	Topeka, Kans.....	8.04
Jacksonville, Fla.....	1.06	Racine, Wis.....	7.92
Charleston, S. C.....	1.08	Passaic, N. J.....	7.45
Norfolk, Va.....	1.19	Oklahoma City, Okla.....	7.23
San Francisco, Cal.....	1.22	Spokane, Wash.....	7.07

AVERAGE COST PER PUPIL OF ELEMENTARY AND SECONDARY SCHOOLS.

Table 32 makes possible a comparison of the average cost per pupil of elementary and secondary schools in each city. It also contains the enrollment figures that have been used in all the computations of average cost made in this study and the date of the close of the fiscal year in each city.

The following table of frequencies shows the distribution of the ratios of average cost of elementary and secondary schools:

TABLE 14.—*Distribution of ratios of average cost of elementary and secondary schools.*

Ratio.	Number of cities.				
	Group I.	Group II.	Group III.	Group IV.	All.
1.00 to 1.49.....		1	1	1	3
1.50 to 1.99.....	2	8	7	8	25
2.00 to 2.49.....	5	4	10	3	22
2.50 to 2.99.....	1		5	4	10
3.00 to 3.49.....		2	3		5
3.50 to 3.99.....	2			1	3
4.00 to 4.49.....			1		1
4.50 to 4.99.....					

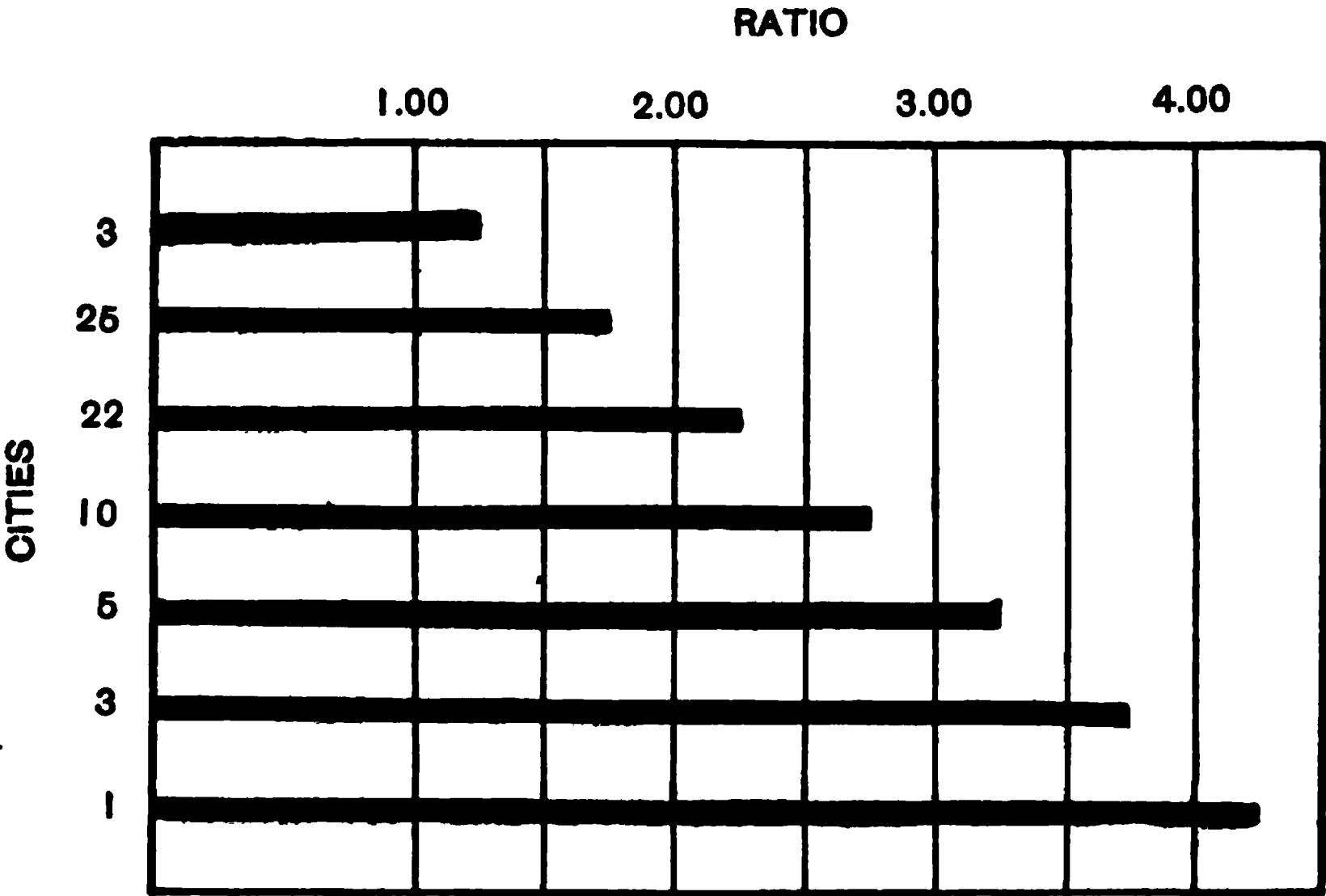


FIG. 9.—Ratios of average costs per pupil of secondary and elementary schools in all cities. This ratio may also be read as the number of dollars expended for secondary schools for each dollar expended for elementary schools.

The following table gives the names of cities in each group that are located at the principal points in the distribution of ratios of average costs of secondary and elementary schools in each group:

TABLE 15.—Showing names of cities at various points in the distribution of ratios of costs of elementary and secondary schools, together with amount of ratio in each case.

	Lowest.	Ratio.	Lower limit of mid- dle 50 per cent.	Ratio.	Median.	Ratio.	Upper limit of mid- dle 50 per cent.	Ratio.	Highest.	Ratio.
All cities.....	Wilkes-Barre, Pa....	1.33	{Tacoma, Wash..... Omaha, Nebr.....}	1.80	Bay City, Mich.....	2.16	{New Britain, Conn.. Knoxville, Tenn....}	2.60	Passaic, N. J.....	4.04
Group I.....	Minneapolis, Minn...	1.75	{San Francisco, Cal.. Buffalo, N. Y.....}	1.97	{Washington, D. C... Los Angeles, Cal....}	2.27	{Chicago, Ill..... Newark, N. J.....}	2.65	Baltimore, Md.....	3.90
Group II.....	Memphis, Tenn.....	1.39	{Nashville, Tenn.... Grand Rapids, Mich..}	1.71	Lowell, Mass.....	1.84	{St. Paul, Minn..... Birmingham, Ala....}	2.34	Scranton, Pa.....	3.15
Group III.....	Wilkes-Barre, Pa....	1.33	{Des Moines, Iowa... New Castle, Pa.....}	1.89	Elizabeth, N. J.....	2.27	{Harrisburg, Pa..... Johnstown, Pa.....}	2.78	Passaic, N. J.....	4.04
Group IV.....	Topeka, Kans.....	1.41		1.72	York, Pa.....	1.90	{Malden, Mass..... Racine, Wis.....}	2.47	Pueblo, Colo.....	3.50

From the above table it may be seen (1) that there is a wide variation in the relative average cost of elementary and high schools; (2) that no territorial lines or division of cities by population can be drawn in making a differentiation between them, each section of the country and one State, Pennsylvania, being represented in almost every column. The extreme variation in all the cities included is 2.71. The extreme variations shown in the table indicate that proper balances are not being maintained in the school expenditures of some cities. More money in some cases should be spent upon the elementary schools; in others less money should be spent upon the high schools. The retardation and elimination statistics of such cities as have extreme ratios should be carefully studied in this connection. For instance, Baltimore, which has just been shown spends too little on its elementary schools rather than too much on its high schools, has a high percentage of retardation and elimination. More money is needed in that city for elementary schools, both to maintain its present curriculum and to widen the scope of those schools, although the expenses of the high schools should not be diminished. (See p. 94.) In some cities it would be a far better distribution of public funds to take away from high schools having high average cost and high percentage of funds devoted to them and to add the same to the broadening of courses in the elementary schools in order to meet the needs of those who are backward or who are losing interest in the present curriculum. This is true especially if the city has high percentages of retardation and elimination.

The question arises, What is the range of a proper ratio between average costs of elementary and high schools? The table above furnishes a tentative answer to the question for each group of cities and for all cities taken together. Taken all in all the best answer for all cities is, The ratio should lie between 1.80 and 2.60—a range of .80—with 2.16 as the best representative amount. The two former figures are limits of the middle 50 per cent for the entire list of cities and any variation below and above these amounts should have reasonable justification.

TABLE 16.—Showing total school expenses and expenses of general control of school systems in 103 cities of 30,000 population and over, 1909.

	Cities.	Total school expenses.	Board of education.	Finance offices.	Superintendent's office.	Other overhead expenses.	Total for general control.
	Grand total.....	\$56,424,146	\$566,896	\$336,802	\$760,775	\$296,917	\$1,961,390
	Group I.....	30,447,159	405,734	235,291	296,533	184,177	1,121,735
	Group II.....	11,133,770	53,811	30,554	162,706	51,806	298,876
	Group III.....	10,687,807	88,256	44,647	199,683	46,401	378,987
	Group IV.....	4,155,410	19,095	26,310	101,853	14,534	161,792

GROUP I.—CITIES HAVING A POPULATION OF 300,000 OR OVER IN 1910.

1	Chicago, Ill.....	\$9,492,789	\$90,925	\$201,380	\$36,929	\$31,946	\$361,180
2	St. Louis, Mo.....	2,798,654	193,866	7,609	7,000	23,075	231,550
3	Cleveland, Ohio.....	2,374,107	7,032	8,379	63,952	111,347	190,710
4	Baltimore, Md.....	1,824,823	20,474	.....	15,248	3,714	39,436
5	Detroit, Mich.....	1,706,858	.....	.....	29,922	.....	29,922
6	Buffalo, N. Y.....	1,607,378	4,929	.....	13,141	.....	118,070
7	San Francisco, Cal.....	1,717,249	11,959	.....	30,325	.....	42,284
8	Milwaukee, Wis.....	1,314,257	19,280	.....	23,541	5,639	48,460
9	Newark, N. J.....	1,944,549	36,019	.....	21,349	.....	57,368
10	New Orleans, La.....	952,247	.....	3,827	20,558	70	24,455
11	Washington, D. C.....	2,055,915	13,369	.....	13,750	4,466	31,586
12	Los Angeles, Cal.....	1,288,852	4,758	14,096	11,600	3,920	34,374
13	Minneapolis, Minn.....	1,369,481	3,123	.....	9,218	.....	12,341

GROUP II.—CITIES HAVING A POPULATION OF 100,000 TO 300,000 IN 1910.

14	Jersey City, N. J.....	\$960,225	\$3,209	.....	\$9,179	\$5,264	\$17,652
15	Providence, R. I.....	954,168	.....	.....	25,323	5,779	31,102
16	St. Paul, Minn.....	755,981	6,962	.....	7,100	.....	13,062
17	Portland, Oreg.....	671,062	.....	\$4,417	9,000	.....	13,417
18	Columbus, Ohio.....	663,826	.....	6,170	5,440	13,184	24,794
19	Toledo, Ohio.....	645,916	3,800	800	3,500	12,505	20,605
20	Oakland, Cal.....	586,014	.....	.....	10,968	83	11,051
21	Syracuse, N. Y.....	584,536	4,578	.....	4,800	1,500	10,878
22	New Haven, Conn.....	556,589	7,823	713	4,817	891	14,244
23	Birmingham, Ala.....	160,318	.....	.....	6,427	.....	6,427
24	Memphis, Tenn.....	268,401	264	3,231	5,400	1,376	10,271
25	Scranton, Pa.....	552,007	.....	13,538	16,506	1,680	31,724
26	Paterson, N. J.....	524,307	4,815	.....	3,700	.....	8,515
27	Omaha, Nebr.....	544,819	12,948	1,600	6,681	584	21,813
28	Grand Rapids, Mich.....	538,899	2,095	85	12,782	2,792	17,754
29	Nashville, Tenn.....	274,065	1,995	.....	3,000	1,417	6,412
30	Lowell, Mass.....	429,964	.....	.....	5,761	1,200	6,961
31	Cambridge, Mass.....	507,322	.....	.....	11,568	.....	11,568
32	Spokane, Wash.....	541,795	6,322	.....	3,500	3,550	13,372
33	Albany, N. Y.....	363,556	.....	.....	7,254	.....	7,254

TABLE 16.—*Showing total school expenses and expenses of general control of school systems in 103 cities of 30,000 population and over, 1909—Continued.*

GROUP III.—CITIES HAVING A POPULATION OF 50,000 TO 100,000 IN 1910.

	Cities.	Total school expenses.	Board of education.	Finance offices.	Superintendent's office.	Other overhead expenses.	Total for general control.
34	Hartford, Conn.....	\$535,300	\$5,000	\$1,867	\$3,203	\$1,182	\$11,252
35	Trenton, N. J.....	408,423	2,680	.....	5,500	.....	8,180
36	New Bedford, Mass.....	331,048	.....	.....	10,525	.....	10,525
37	Reading, Pa.....	282,263	.....	1,800	7,920	.....	9,720
38	Camden, N. J.....	419,283	.....	.....	8,392	.....	8,392
39	Dallas, Tex.....	234,641	3,740	.....	3,672	253	7,665
40	Springfield, Mass.....	505,700	.....	.....	11,790	2,946	14,736
41	Wilmington, Del.....	235,293	.....	.....	8,264	140	8,404
42	Des Moines, Iowa.....	495,745	4,333	875	5,217	3,252	13,677
43	Lawrence, Mass.....	293,398	.....	.....	4,842	806	5,648
44	Tacoma, Wash.....	363,142	4,466	.....	7,927	4,175	16,568
45	Kansas City, Kans.....	253,355	9,349	50	4,273	2,286	15,958
46	St. Joseph, Mo.....	269,754	6,327	600	3,932	1,432	12,291
47	Troy, N. Y.....	330,346	2,900	194	4,950	439	8,483
48	Utica, N. Y.....	268,696	.....	.....	4,800	5,192	9,992
49	Elizabeth, N. J.....	212,509	2,663	.....	3,600	.....	6,263
50	Schenectady, N. Y.....	242,238	1,422	.....	3,700	657	5,779
51	Hoboken, N. J.....	360,404	10,956	.....	4,650	300	15,906
52	Manchester, N. H.....	157,726	360	.....	3,582	.....	3,942
53	Evansville, Ind.....	232,761	1,602	800	4,096	124	6,622
54	Norfolk, Va.....	144,720	1,229	228	1,615	1,328	4,400
55	Wilkes-Barre, Pa.....	221,600	.....	6,503	6,178	266	12,947
56	Peoria, Ill.....	270,458	3,820	600	3,000	8,011	15,431
57	Erie, Pa.....	217,215	6,021	9,178	4,185	127	19,511
58	Savannah, Ga.....	124,860	.....	.....	4,500	1,127	5,627
59	Oklahoma, Okla.....	189,447	.....	2,196	3,320	.....	5,515
60	Harrisburg, Pa.....	253,430	4,040	2,020	2,800	2,520	11,380
61	Charleston, S. C.....	103,359	.....	.....	2,720	.....	2,720
62	Portland, Me.....	257,563	.....	.....	3,515	1,192	4,707
63	East St. Louis, Ill.....	187,189	3,500	2,663	.....	1,491	7,674
64	Holyoke, Mass.....	248,410	.....	.....	5,698	1,319	6,947
65	Jacksonville, Fla.....	85,068	330	2,070	3,404	.....	5,804
66	Brockton, Mass.....	253,474	.....	.....	6,064	.....	6,064
67	Bayonne, N. J.....	287,089	4,018	.....	3,000	277	7,295
68	Johnstown, Pa.....	183,061	.....	2,606	5,319	.....	7,925
69	Passaic, N. J.....	209,331	3,164	.....	3,540	.....	6,704
70	Wichita, Kans.....	138,570	1,371	300	2,450	1,280	5,401
71	Covington, Ky.....	134,819	2,111	.....	2,400	2,195	6,706
72	Allentown, Pa.....	162,076	.....	6,535	4,964	350	11,849
73	Springfield, Ill.....	185,208	.....	.....	6,029	120	6,149
74	Saginaw, Mich.....	241,044	468	2,823	6,746	1,614	11,651
75	Canton, Ohio.....	157,771	2,386	720	3,481	.....	6,587

TABLE 16.—*Showing total school expenses and expenses of general control of school systems in 103 cities of 30,000 population and over, 1909—Continued.***GROUP IV.—CITIES HAVING A POPULATION OF 30,000 TO 50,000 IN 1910.**

	Cities.	Total school expenses.	Board of education.	Finance offices.	Superintendent's office.	Other overhead expenses.	Total for general control.
76	Sioux City, Iowa.....	\$201,948	.....	.....	\$6,544	.....	\$6,544
77	Lancaster, Pa.....	137,387	.....	\$1,533	3,458	\$203	5,194
78	Atlantic City, N. J.....	184,872	.....	1,200	3,355	.....	4,555
79	Little Rock, Ark.....	128,597	.....	6,770	4,087	950	11,807
80	Rockford, Ill.....	163,741	\$1,000	.....	2,770	.....	3,830
81	Bay City, Mich.....	168,253	500	250	3,550	2,001	6,301
82	York, Pa.....	146,104	.....	2,435	5,304	1,200	8,939
83	Sacramento, Cal.....	220,688	.....	.....	4,262	.....	4,262
84	Chattanooga, Tenn.....	86,702	1,340	.....	2,556	75	3,971
85	Malden, Mass.....	226,888	.....	.....	5,475	.....	5,475
86	Pueblo, Colo.....	187,326	2,133	1,850	5,756	.....	9,739
87	Haverhill, Mass.....	184,473	.....	.....	3,087	2,347	5,434
88	New Britain, Conn.....	143,210	50	.....	4,531	888	5,469
89	Topeka, Kans.....	201,880	1,408	350	3,400	.....	5,158
90	Davenport, Iowa.....	226,280	1,800	100	2,750	2,187	6,837
91	Wheeling, W. Va.....	153,298	1,778	2,948	3,329	.....	8,055
92	Chester, Pa.....	122,064	50	3,688	2,734	850	7,322
93	Dubuque, Iowa.....	116,346	1,480	420	2,700	36	4,636
94	Woonsocket, R. I.....	97,801	.....	.....	2,932	501	3,433
95	Racine, Wis.....	140,916	900	.....	2,700	661	4,261
96	Knoxville, Tenn.....	79,215	.....	.....	3,490	.....	3,490
97	New Castle, Pa.....	146,085	100	3,081	3,201	56	6,438
98	Joliet, Ill.....	117,329	2,617	.....	4,512	772	7,901
99	Auburn, N. Y.....	123,028	1,868	.....	4,321	440	6,629
100	Taunton, Mass.....	142,618	.....	.....	2,873	50	2,923
101	Oakosh, Wis.....	107,606	16	.....	2,956	244	3,216
102	Joplin, Mo.....	120,347	300	1,685	3,060	900	5,945
103	Newport, Ky.....	80,409	1,695	.....	2,160	173	4,028

TABLE 17.—Showing expenses of instruction, operation, and maintenance of elementary schools, including kindergartens, in 103 cities of 30,000 population and over, 1909.

Cities.	Salaries of teachers.	Salaries and expenses of supervisors.	Text-books, stationery, and general school supplies.	Janitors, engineers, and firemen.	Fuel.	Water.	Light and power.	Janitors' supplies and sundry expenses.	Apparatus and manual training equipment.	School libraries.	Repairs and replacements of equipment.	Repairs to buildings.	Total.
Grand total.....	\$31,362,595	\$987,692	\$1,414,330	\$3,246,078	\$1,496,456	\$99,018	\$147,205	\$674,531	\$233,834	\$46,321	\$442,018	\$2,810,129	\$42,960,207
Group I.....	17,184,477	410,444	677,736	1,749,075	688,568	47,868	83,290	369,102	113,938	24,791	227,512	1,622,601	23,199,402
Group II.....	6,245,830	204,786	277,141	646,172	338,193	23,883	20,808	110,320	72,397	6,357	58,745	526,950	8,530,582
Group III.....	5,742,997	260,777	354,545	608,734	332,955	18,314	32,291	123,539	33,545	11,758	102,525	471,758	8,093,738
Group IV.....	2,189,291	111,685	104,908	243,097	136,740	8,953	10,816	71,570	13,954	3,415	53,236	188,820	3,136,485

GROUP I.—CITIES HAVING A POPULATION OF 300,000 OR OVER IN 1910.

1	Chicago, Ill.....	\$5,501,792	\$22,500	\$136,115	\$664,415	\$255,643	.....	\$15,091	\$39,611	\$23,686	\$15,573	\$7,647	\$678,651	\$7,360,704
2	St. Louis, Mo.....	1,503,994	39,658	77,796	114,096	32,599	\$5,387	13,982	27,710	3,517	1,483	7,085	78,953	1,906,210
3	Cleveland, Ohio.....	1,108,445	108,450	16,794	145,191	58,876	.....	11,875	88,211	3,261	.....	4,476	101,860	1,647,439
4	Baltimore, Md.....	1,065,375	2,995	65,062	100,921	55,521	.....	8,404	200	2,654	.....	10,301	117,667	1,429,100
5	Detroit, Mich.....	996,945	13,500	44,182	110,730	38,661	.....	308	18,765	36,997	.....	.....	39,192	1,299,280
6	Buffalo, N. Y.....	825,588	114,625	50,995	78,724	42,983	13,439	9,896	38,321	11,045	4,231	32,415	77,082	1,299,344
7	San Francisco, Cal.....	1,049,003	.....	7,547	134,153	8,677	12,420	1,493	38,029	3,210	.....	18,072	59,412	1,332,016
8	Milwaukee, Wis.....	770,349	10,485	13,735	57,902	39,473	11,347	5,051	3,096	8,896	2,186	.....	89,159	1,011,679
9	Newark, N. J.....	1,126,725	24,992	59,356	88,968	34,126	5,175	5,398	10,115	7,133	.....	63,031	91,574	1,516,593
10	New Orleans, La.....	549,392	8,400	43,407	39,583	7,221	.....	100	53,859	.....	.....	25,987	73,663	801,612
11	Washington, D. C.....	1,040,259	52,225	74,116	87,845	66,386	.....	5,651	16,591	11,049	.....	6,056	173,859	1,534,087
12	Los Angeles, Cal.....	820,494	.....	12,784	50,989	12,082	150	6,041	14,230	2,510	.....	7,612	41,529	969,739
13	Minneapolis, Minn.....	826,116	12,614	75,847	75,558	36,320	.....	.....	20,364	.....	.....	44,830	.....	1,091,649

GROUP II.—CITIES HAVING A POPULATION OF 100,000 TO 300,000 IN 1910.

14	Jersey City, N. J.....	\$637,202	\$9,686	\$29,203	\$45,998	\$29,087	.....	\$1,823	\$5,094	\$15,507	\$170	\$5,514	\$44,180	\$823,464
15	Providence, R. I.....	476,177	9,949	22,860	50,417	39,955	\$4,775	1,214	2,795	.....	.....	5,809	70,699	684,710
16	St. Paul, Minn.....	442,073	8,225	2,000	82,048	22,281	3,755	.....	14,134	.....	.....	.....	21,686	596,202
17	Portland, Oreg.....	418,562	.....	11,888	28,842	7,238	2,447	2,295	4,042	10,439	84	.....	41,607	527,444
18	Columbus, Ohio.....	299,571	66,771	16,599	43,698	17,604	.....	.....	3,706	11,996	.....	9,122	14,877	483,944

19	Toledo, Ohio.....	400,598	2,450	20,510	24,649	23,358	.....	632	22,052	7,215	.....	6,656	9,608	517,813
20	Oakland, Cal.....	368,371	.....	11,412	25,889	4,093	1,728	1,032	3,716	5,222	.....	9,346	28,981	462,936
21	Syracuse, N. Y.....	310,611	1,200	14,900	28,291	30,737	.....	2,865	8,039	3,354	.....	.....	20,151	420,148
22	New Haven, Conn.....	304,456	31,750	15,218	36,724	22,042	.....	1,757	8,835	588	.....	974	6,389	430,690
23	Birmingham, Ala.....	84,289	12,433	754	6,785	3,148	535	74	1,356	.....	.....	130	4,801	114,305
24	Memphis, Tenn.....	185,078	8,110	9,408	20,159	5,505	1,443	500	2,424	.....	.....	6,926	6,841	246,388
25	Scranton, Pa.....	287,794	.....	30,017	38,092	19,621	5,073	500	1,998	.....	.....	.....	12,408	395,503
26	Paterson, N. J.....	322,018	1,000	7,782	28,650	8,572	1,085	80	2,040	.....	.....	3,731	56,848	426,816
27	Omaha, Nebr.....	306,487	.....	13,887	34,503	18,926	.....	713	4,264	5,236	.....	1,447	32,211	417,674
28	Grand Rapids, Mich.....	270,174	37,088	11,700	26,579	10,496	1,152	2,755	1,943	4,661	.....	2,400	41,381	410,329
29	Nashville, Tenn.....	171,561	5,300	4,473	13,013	3,537	660	.....	2,754	.....	.....	1,601	27,840	230,939
30	Lowell, Mass.....	215,062	.....	9,215	38,098	16,866	1,225	1,826	2,075	.....	.....	.....	37,002	321,391
31	Cambridge, Mass.....	251,470	1,192	6,298	31,561	21,280	.....	990	2,278	7,255	.....	2,809	20,910	346,002
32	Spokane, Wash.....	284,727	4,932	25,087	28,676	16,460	.....	729	14,975	830	.....	.....	13,913	390,734
33	Albany, N. Y.....	209,534	4,700	13,980	18,000	16,837	.....	1,012	1,800	94	.....	2,221	14,532	283,150

GROUP III.—CITIES HAVING A POPULATION OF 50,000 TO 100,000 IN 1910.

34	Hartford, Conn.....	\$254,187	\$30,600	\$21,272	\$27,382	\$16,968	\$2,308	\$3,349	\$15,382	.....	\$1,744	\$2,926	\$21,673	\$397,781
35	Trenton, N. J.....	241,124	5,050	14,014	18,936	11,715	.....	53,750	8,560	.....	130	1,707	8,343	310,379
36	New Bedford, Mass.....	171,521	7,661	13,928	20,824	13,935	.....	518	3,701	\$1,427	.....	1,046	17,996	252,557
37	Reading, Pa.....	159,871	1,595	10,544	23,709	10,453	.....	100	2,497	822	.....	3,000	7,099	219,690
38	Camden, N. J.....	259,107	500	21,493	29,573	12,291	369	421	2,336	2,867	.....	8,043	15,139	352,139
39	Dallas, Tex.....	121,371	27,188	2,244	9,918	4,080	.....	.....	569	.....	.....	4,522	(1)	169,892
40	Springfield, Mass.....	230,794	18,980	17,303	27,148	24,241	.....	3,534	6,947	4,433	.....	2,590	13,808	349,773
41	Wilmington, Del.....	141,433	.....	7,676	11,200	9,046	.....	.....	1,361	1,058	.....	.....	13,572	185,346
42	Des Moines, Iowa.....	258,789	6,867	28,821	29,781	13,962	2,029	852	2,390	2,798	.....	.....	23,460	369,749
43	Lawrence, Mass.....	158,282	8,055	8,418	17,465	13,497	.....	1,778	4,816	.....	.....	244	13,623	226,178
44	Tacoma, Wash.....	182,473	23,084	11,410	17,625	7,825	1,439	629	4,276	931	.....	3,440	4,697	257,829
45	Kansas City, Kans.....	136,342	.....	3,946	12,870	7,318	1,157	173	1,551	728	.....	528	9,290	173,903
46	St. Joseph, Mo.....	154,814	4,104	3,367	26,085	9,097	22	952	133	1,188	593	.....	7,966	208,321
47	Troy, N. Y.....	154,341	6,831	7,067	17,845	15,194	.....	1,037	3,070	63	2,645	5,222	32,161	245,446
48	Utica, N. Y.....	156,622	.....	4,810	17,362	14,080	.....	2,142	5,134	123	117	290	6,725	207,405
49	Elizabeth, N. J.....	114,503	2,700	12,530	11,450	5,289	579	1,787	1,108	.....	90	6,924	3,721	160,681
50	Schenectady, N. Y.....	141,956	7,130	4,927	9,096	9,580	.....	1,878	1,095	684	1,026	13,941	(1)	191,313
51	Hoboken, N. J.....	217,270	.....	12,796	14,699	5,802	1,244	1,068	3,592	.....	.....	1,330	29,686	287,446
52	Manchester, N. H.....	92,949	.....	4,124	6,280	10,368	1,165	683	1,299	599	.....	1,256	6,807	125,530
53	Evansville, Ind.....	118,516	20,006	3,524	14,980	5,147	.....	140	3,987	.....	.....	446	11,926	178,672
54	Norfolk, Va.....	97,210	.....	2,186	11,707	2,890	.....	502	1,088	647	.....	1,606	5,462	123,298
55	Wilkes-Barre, Pa.....	122,697	2,188	14,201	12,636	7,651	515	532	1,539	.....	.....	15,006	(1)	176,965

1 Included in expenses for repairs and replacements of equipment.

TABLE 17.—Showing expenses of instruction, operation, and maintenance of elementary schools, including kindergartens, in 103 cities of 30,000 population and over, 1909—Continued.

EXPENSES OF CITY SCHOOL SYSTEMS.

GROUP III.—CITIES HAVING A POPULATION OF 50,000 TO 100,000 IN 1910—Continued.

Cities.	Salaries of teachers.	Salaries and expenses of supervisors.	Text-books, stationery, and general school supplies.	Janitors, engineers, and firemen.	Fuel.	Water.	Light and power.	Janitors' supplies and dry expenses.	Apparatus and manual-training equipment.	School libraries.	Repairs and replacements of equipment.	Repairs to buildings.	Total.
56 Peoria, Ill.	\$171,701	\$6,607	\$3,395	\$15,085	\$5,584	.....	\$702	\$6379	\$3,949	.....	.....	\$11,448	\$218,850
57 Erie, Pa.	97,834	15,685	8,084	13,695	7,569	.....	1,489	916	1,185	.....	.....	4,517	150,859
58 Savannah, Ga.	90,294	.....	.....	4,087	1,588	.....	.....	538	.....	.....	.....	1,887	98,394
59 Oklahoma, Okla.	101,653	5,000	6,288	8,868	3,175	.....	.....	.....	.....	.....	5,820	9,209	140,003
60 Harrisburg, Pa.	121,918	2,800	16,835	17,520	7,285	\$269	896	754	.....	.....	5,673	9,904	183,864
61 Charleston, S. C.	46,890	.....	262	1,300	.....	.....	.....	8,625	.....	.....	.....	3,157	60,234
62 Portland, Me.	135,902	4,300	8,912	18,690	10,532	199	1,043	2,347	1,294	\$536	1,112	14,161	199,028
63 East St. Louis, Ill.	88,034	21,293	4,392	19,417	3,321	1,654	308	1,448	1,199	965	1,267	6,762	150,060
64 Holyoke, Mass.	124,556	3,494	8,334	10,914	8,376	1,375	1,299	2,465	.....	.....	1,539	19,520	182,172
65 Jacksonville, Fla.	44,311	.....	.....	2,398	632	.....	.....	1,667	136	.....	1,736	4,301	55,181
66 Brockton, Mass.	125,623	3,000	11,548	12,917	13,866	474	682	3,421	.....	.....	.....	9,350	180,881
67 Bayonne, N. J.	175,756	2,340	14,746	14,133	6,000	.....	.....	7,787	758	.....	3,497	20,000	245,017
68 Johnstown, Pa.	90,492	2,400	6,134	12,342	4,000	1,625	100	.....	.....	.....	.....	23,937	141,030
69 Passaic, N. J.	119,497	.....	8,401	10,410	6,570	425	1,260	2,942	.....	58	600	11,121	161,284
70 Wichita, Kans.	72,875	1,720	2,835	7,057	2,927	.....	.....	4,451	.....	.....	1,781	14,368	106,014
71 Covington, Ky.	78,533	5,030	166	7,320	1,749	310	475	1,538	.....	.....	331	11,691	107,143
72 Allentown, Pa.	82,977	1,545	6,495	9,951	4,797	.....	325	2,899	.....	.....	809	16,209	125,997
73 Springfield, Ill.	99,584	6,484	489	8,973	3,252	.....	79	2,921	4,514	.....	1,694	12,231	140,221
74 Saginaw, Mich.	103,122	4,300	6,573	13,426	6,990	1,156	804	1,629	3,142	3,804	1,141	10,352	156,439
75 Canton, Ohio.	85,273	2,240	10,086	11,700	4,313	.....	14	391	.....	.....	273	4,484	118,774

GROUP IV.—CITIES HAVING A POPULATION OF 30,000 TO 50,000 IN 1910.

76 Sioux City, Iowa.	\$117,332	\$1,700	\$1,167	\$14,214	\$9,790	\$827	\$127	\$3,294	.....	.....	.....	\$12,326	\$160,777
77 Lancaster, Pa.	66,232	.....	4,809	9,800	4,642	525	132	3,657	.....	.....	.....	6,920	100,269
78 Atlantic City, N. J.	87,725	.....	10,799	7,991	9,236	13,000	.....	16,538	.....	.....	.....	11,090	146,379
79 Little Rock, Ark.	72,653	3,300	2,547	5,237	3,304	992	495	999	.....	.....	2,150	2,978	94,655
80 Rockford, Ill.	80,096	4,896	634	10,969	6,995	.....	336	3,876	\$1,804	.....	.....	10,220	119,826

TABLE 18.—Showing expenses of instruction, operation, and maintenance of secondary schools in 103 cities of 30,000 population and over, 1909.

Cities.	Salaries of teachers.	Salaries and expenses of supervisors.	Text-books, stationery and general school supplies.	Janitors, engineers, and firemen.	Fuel.	Water.	Light and power.	Janitors' supplies and sundry expenses.	Apparatus and manual training equipment.	School libraries.	Repairs and replacements of equipment.	Repairs to buildings.	Total.
Grand total.....	\$6,309,322	\$186,113	\$371,893	\$546,100	\$236,076	\$13,764	\$58,277	\$130,823	\$132,949	\$41,005	\$60,113	\$338,629	\$8,425,064
Group I.....	3,137,125	82,909	172,429	260,451	94,287	4,223	25,027	56,757	58,563	10,754	30,429	182,584	4,115,538
Group II.....	1,402,483	30,736	73,255	120,190	58,067	3,663	12,432	28,736	28,824	23,697	9,730	58,395	1,850,208
Group III.....	1,250,071	48,371	96,768	113,245	52,996	3,699	13,884	32,806	38,356	4,311	14,655	71,732	1,740,894
Group IV.....	519,643	24,097	29,441	52,214	30,726	2,179	6,934	12,524	7,206	2,243	5,299	25,918	718,424

GROUP I.—CITIES HAVING A POPULATION OF 300,000 AND OVER IN 1910.

1 Chicago, Ill.....	\$820,868	\$2,400	\$48,447	\$69,912	\$27,931	.....	\$6,273	\$6,174	\$14,671	.....	\$802	\$75,769	\$1,073,247
2 St. Louis, Mo.....	306,525	.....	26,923	38,873	10,068	\$469	2,237	7,660	4,192	\$59	866	9,699	407,571
3 Cleveland, Ohio.....	262,466	26,900	4,594	24,942	8,598	.....	3,265	2,830	4,725	.....	2,104	10,546	370,970
4 Baltimore, Md.....	190,207	4,200	25,788	17,475	4,065	.....	934	283	3,229	.....	821	12,857	259,859
5 Detroit, Mich.....	229,973	.....	11,648	27,370	9,089	.....	150	12,557	.....	.....	.....	6,248	297,035
6 Buffalo, N. Y.....	131,768	12,250	11,253	12,200	4,222	1,111	3,198	5,889	4,385	1,369	790	9,895	198,330
7 San Francisco, Cal.....	178,070	.....	660	9,326	1,260	1,500	510	4,023	762	.....	1,205	9,210	206,526
8 Milwaukee, Wis.....	126,743	6,250	4,711	11,290	7,968	916	1,840	1,995	4,983	2,121	.....	10,212	178,019
9 Newark, N. J.....	122,663	.....	7,282	7,456	1,613	227	2,283	1,183	2,182	.....	4,503	6,337	155,729
10 New Orleans, La.....	55,801	3,200	3,440	2,803	456	.....	50	6,078	.....	.....	341	2,344	74,513
11 Washington, D. C.....	289,873	24,325	6,802	14,209	8,308	.....	2,734	2,691	10,731	4,735	4,123	17,585	386,116
12 Los Angeles, Cal.....	210,643	.....	2,747	10,749	3,160	.....	1,553	4,464	5,960	2,470	2,477	11,882	256,106
13 Minneapolis, Minn.....	191,525	4,384	18,134	13,856	7,549	.....	.....	930	2,743	.....	12,397	.....	251,518

GROUP II.—CITIES HAVING A POPULATION OF 100,000 TO 300,000 IN 1910.

14 Jersey City, N. J.....	\$64,457	.....	\$2,385	\$8,284	\$4,072	.....	\$207	\$670	\$1,842	.....	.....	\$1,475	\$83,392
15 Providence, R. I.....	126,253	.....	15,006	11,742	8,141	\$572	816	1,094	.....	\$812	\$1,714	9,969	177,628
16 St. Paul, Minn.....	106,778	.....	.....	14,507	3,971	676	.....	3,227	.....	8,036	.....	4,337	141,532
17 Portland, Oreg.....	65,020	.....	3,044	3,750	1,963	310	225	950	2,520	.....	.....	5,162	82,954
18 Columbus, Ohio.....	129,644	11,777	679	9,717	6,165	.....	.....	812	.....	11,018	1,209	2,473	173,494

19	Toledo, Ohio.....	79,577	1,550	4,930	3,580	3,373	.....	1,152	2,397	6,954	.....	167	.....	103,690
20	Oakland, Cal.....	82,823	.....	4,281	4,418	3,928	483	.....	1,672	1,599	.....	2,272	2,774	98,017
21	Syracuse, N. Y.....	85,884	.....	480	9,445	2,914	.....	1,299	4,028	.....	.....	.....	2,500	106,611
22	New Haven, Conn.....	63,297	5,700	4,715	7,772	3,510	.....	838	1,331	887	270	156	981	89,457
23	Birmingham, Ala.....	23,144	2,100	1,178	3,084	1,321	242	816	1,359	2,300	270	74	610	34,448
24	Memphis, Tenn.....	19,553	.....	216	1,680	298	140	.....	585	.....	227	210	.....	22,909
25	Scranton, Pa.....	85,605	.....	4,188	5,500	1,026	500	100	974	.....	.....	.....	3,777	101,760
26	Paterson, N. J.....	56,019	.....	3,318	2,000	.....	.....	.....	100	.....	.....	326	.....	61,763
27	Omaha, Nebr.....	72,608	.....	5,729	5,153	2,666	.....	79	2,759	1,098	.....	816	2,679	93,587
28	Grand Rapids, Mich.....	66,885	8,100	3,913	5,650	2,148	448	943	320	160	610	100	3,236	92,513
29	Nashville, Tenn.....	23,864	.....	420	1,070	130	50	.....	200	.....	.....	75	1,100	26,909
30	Lowell, Mass.....	40,664	.....	4,312	5,012	2,893	242	1,937	199	291	.....	377	2,821	58,748
31	Cambridge, Mass.....	81,753	.....	5,071	9,405	6,718	.....	865	1,568	4,830	.....	1,873	8,629	120,712
32	Spokane, Wash.....	84,837	.....	9,313	5,771	3,764	.....	1,244	4,247	5,829	1,092	.....	3,328	119,425
33	Albany, N. Y.....	43,778	.....	5,077	2,700	2,066	.....	1,540	1,244	403	956	361	2,544	60,669

GROUP III.—CITIES HAVING A POPULATION OF 50,000 TO 100,000 IN 1910.

34	Hartford, Conn.....	90,944	34,000	35,999	34,844	34,599	3791	3504	33,899	.....	.....	3546	31,913	388,039
35	Trenton, N. J.....	38,138	.....	3,309	2,435	1,024	.....	350	3,673	88,178	.....	398	1,148	55,653
36	New Bedford, Mass.....	25,241	206	2,302	2,210	1,227	.....	151	427	.....	.....	90	549	32,403
37	Reading, Pa.....	31,871	.....	5,400	3,579	1,161	.....	300	1,086	.....	.....	500	500	44,706
38	Camden, N. J.....	24,339	500	1,988	4,570	633	.....	342	553	3,156	.....	863	8,977	45,921
39	Dallas, Tex.....	39,286	2,925	748	4,185	1,369	.....	.....	284	1,659	31,651	142	.....	52,239
40	Springfield, Mass.....	73,367	8,300	7,800	10,302	4,895	.....	2,264	4,424	1,867	.....	316	3,356	116,891
41	Wilmington, Del.....	30,022	.....	2,943	2,250	941	.....	.....	630	.....	.....	.....	2,208	38,994
42	Des Moines, Iowa.....	61,213	7,200	1,921	7,230	4,448	407	535	227	3,202	.....	.....	9,273	95,656
43	Lawrence, Mass.....	29,566	.....	2,523	1,335	1,568	.....	1,081	109	.....	.....	25	349	36,556
44	Tacoma, Wash.....	53,165	4,047	3,622	4,077	2,309	195	129	1,854	3,355	599	2,482	800	81,634
45	Kansas City, Kans.....	44,035	.....	1,989	5,006	1,861	469	1,206	1,213	2,637	212	610	1,541	60,779
46	St. Joseph, Mo.....	37,718	306	578	3,284	958	10	1,103	21	788	57	.....	877	45,700
47	Troy, N. Y.....	34,913	792	270	3,558	1,635	15	562	714	470	.....	1,507	4,264	48,700
48	Utica, N. Y.....	29,353	.....	1,352	3,949	501	.....	222	451	14	.....	46	2,849	38,737
49	Elizabeth, N. J.....	20,132	.....	2,122	1,765	637	105	22	191	.....	.....	668	1,294	26,936
50	Schenectady, N. Y.....	29,036	.....	.....	1,440	1,210	.....	939	274	1,095	367	.....	1,626	35,687
51	Hoboken, N. J.....	27,003	.....	3,869	2,400	754	19	67	318	1,409	.....	200	2,501	38,630
52	Manchester, N. H.....	16,527	.....	2,364	1,350	1,109	165	234	297	.....	.....	449	755	23,250
53	Evansville, Ind.....	36,514	1,800	.....	2,750	571	.....	21	730	490	.....	50	1,214	44,140

TABLE 18.—Showing expenses of instruction, operation, and maintenance of secondary schools in 103 cities of 30,000 population and over, 1909—Cont'd.

EXPENSES OF CITY SCHOOL SYSTEMS.

GROUP III.—CITIES HAVING A POPULATION OF 50,000 TO 100,000 IN 1910.

	Cities.	Salaries of teachers.	Salaries and expenses of supervisors.	Text-books and stationery and general school supplies.	Janitors, engineers, and firemen.	Fuel.	Water.	Light and power.	Janitors' supplies and sundry expenses.	Apparatus and manual training equipment.	School libraries.	Repairs and replacements of equipment.	Repairs to buildings.	Total.
54	Norfolk, Va.	\$13,018	.....	322	900	180	.....	19	90	.....	.....	.....	.....	14,429
55	Wilkes-Barre, Pa.	23,400	62	1,155	1,200	303	32	124	445	785	.....	1,438	(1)	28,944
56	Peoria, Ill.	22,815	2,500	340	1,580	1,075	.....	119	91	439	.....	.....	888	29,807
57	Erie, Pa.	21,767	5,188	4,534	2,520	1,454	.....	350	1,918	.....	.....	200	334	38,265
58	Savannah, Ga.	14,649	1,500	.....	806	181	.....	82	60	679	.....	.....	.....	17,957
59	Oklahoma, Okla.	30,364	.....	2,500	990	350	.....	.....	.....	.....	.....	700	1,081	35,935
60	Harrisburg, Pa.	35,592	.....	3,973	3,234	1,705	39	379	75	2,268	.....	427	2,236	49,928
61	Charleston, S. C.	11,411	.....	.....	300	.....	.....	.....	2,156	.....	.....	.....	790	14,657
62	Portland, Me.	33,057	.....	4,073	2,640	1,591	.....	165	260	.....	.....	.....	3,051	44,837
63	East St. Louis, Ill.	15,926	1,600	301	1,475	610	337	167	135	.....	96	269	399	21,315
64	Holyoke, Mass.	28,848	792	2,615	4,337	3,638	190	1,623	990	.....	.....	582	1,899	45,514
65	Jacksonville, Fla.	13,125	.....	.....	375	210	.....	.....	556	.....	.....	579	1,802	16,647
66	Brockton, Mass.	40,625	.....	6,109	4,713	1,656	268	155	2,342	895	275	.....	1,609	58,647
67	Bayonne, N. J.	18,290	.....	1,889	1,240	404	.....	.....	1,208	.....	.....	.....	1,005	24,128
68	Johnstown, Pa.	20,619	2,300	5,310	1,480	270	74	8	.....	.....	.....	.....	2,196	32,257
69	Pascale, N. J.	22,807	.....	4,257	960	450	66	196	65	2,605	.....	.....	.....	31,406
70	Wichita, Kans.	15,849	1,933	362	1,181	650	.....	.....	523	.....	.....	.....	462	20,960
71	Covington, Ky.	11,552	.....	.....	960	256	93	142	456	.....	.....	79	2,271	15,809
72	Allentown, Pa.	16,010	.....	1,769	725	1,000	.....	.....	500	.....	410	.....	500	20,914
73	Springfield, Ill.	24,107	.....	72	1,380	552	.....	101	1,809	140	.....	1,052	2,075	31,288
74	Saginaw, Mich.	47,205	900	1,944	5,930	2,325	424	210	699	2,225	644	400	2,000	64,908
75	Canton, Ohio	21,662	1,520	4,144	1,620	646	.....	12	44	.....	.....	37	1,120	30,795

GROUP IV.—CITIES HAVING A POPULATION OF 30,000 TO 50,000 IN 1910.

76	Sioux City, Iowa.	\$20,912	.....	\$1,677	\$2,948	\$1,290	\$172	\$143	\$500	.....	.....	.....	\$1,120	\$28,762
77	Lancaster, Pa.	16,600	.....	1,500	1,884	1,500	80	.....	500	.....	.....	\$1,000	3,019	26,083
78	Atlantic City, N. J.	22,607	.....	1,200	2,000	1,500	\$500	.....	1,800	.....	.....	.....	.....	29,607
79	Little Rock, Ark.	15,310	.....	400	1,425	780	100	70	190	.....	.....	150	600	19,025
80	Rockford, Ill.	25,496	.....	247	4,965	2,575	.....	907	909	\$687	.....	96	3,293	39,165

81	Bay City, Mich.....	26,125	83,200	1,150	1,710	975	88	60	310	.....	.....	.....	37	1,878	35,533
82	York, Pa.....	15,276	459	2,210	1,620	856	158	573	.....	.....	.....	.....	100	218	21,470
83	Sacramento, Cal.....	25,640	3,000	2,449	2,760	214	.....	130	1,105	240	.....	.....	431	845	36,534
84	Chattanooga, Tenn.....	10,818	.....	320	450	250	29	13	165	.....	.....	.....	.....	.....	12,045
85	Malden, Mass.....	38,412	1,040	5,253	3,686	4,445	.....	841	350	.....	.....	.....	.....	.....	54,028
86	Pueblo, Colo.....	27,615	.....	1,024	3,161	742	.....	62	228	.....	850	.....	499	1,345	34,726
87	Haverhill, Mass.....	23,197	549	2,573	891	1,170	.....	510	28	401	.....	.....	.....	786	30,105
88	New Britain, Conn.....	12,818	3,265	510	1,678	1,127	.....	216	370	.....	256	.....	.....	561	20,801
89	Topeka, Kans.....	33,945	.....	240	2,670	2,766	98	886	140	.....	33	.....	.....	2,756	43,534
90	Davenport, Iowa.....	27,335	7,329	255	6,200	1,859	.....	375	454	1,670	178	.....	775	.....	46,430
91	Wheeling, W. Va.....	11,150	996	474	480	291	.....	54	1,016	.....	.....	.....	193	347	15,001
92	Chester, Pa.....	11,398	.....	.....	1,500	.....	.....	.....	1,200	.....	.....	.....	.....	.....	14,006
93	Dubuque, Iowa.....	14,875	1,800	61	1,130	627	727	362	299	131	416	.....	139	315	20,852
94	Woonsocket, R. I.....	8,460	45	337	560	297	25	26	97	.....	101	.....	22	296	10,286
95	Racine, Wis.....	16,540	2,154	912	1,350	991	.....	360	267	1,643	581	.....	420	842	26,080
96	Knoxville, Tenn.....	10,632	.....	197	657	230	34	34	135	.....	.....	.....	641	1,020	13,580
97	Newcastle, Pa.....	15,218	.....	2,959	810	235	10	184	787	.....	.....	.....	30	566	20,799
98	Joliet, Ill.....	21,315	.....	361	2,305	964	.....	287	96	84	167	.....	34	300	26,907
99	Auburn, N. Y.....	18,510	.....	142	833	1,044	100	209	197	154	19	.....	.....	1,391	22,599
100	Taunton, Mass.....	12,900	260	722	1,328	1,959	58	19	985	63	.....	.....	.....	1,020	19,314
101	Oshkosh, Wis.....	15,107	.....	1,044	1,563	1,246	.....	416	191	394	395	.....	732	1,012	22,100
102	Joplin, Mo.....	11,948	.....	1,210	810	583	.....	154	211	1,500	47	.....	.....	.....	16,463
103	Newport, Ky.....	9,474	.....	14	840	209	.....	43	.....	239	.....	.....	.....	2,388	13,207

¹ Included in expenses for repairs and replacements of equipment.

² Estimate.

TABLE 19.—Showing total cost of instruction, operation, and maintenance of normal, evening, vacation, and special schools in 103 cities of 30,000 population and over, 1909.

Cities.	Normal schools.	Evening schools.	Vacation schools.	Special schools.	Total.
Grand total.....	\$341,328	\$912,464	\$96,849	\$208,869	\$1,559,510
Group I.....	310,768	563,168	78,811	167,159	1,119,906
Group II.....	2,890	173,926	8,714	16,687	202,217
Group III.....	27,670	140,753	8,540	18,679	195,642
Group IV.....		34,617	784	6,344	41,745

GROUP I.—CITIES HAVING A POPULATION OF 300,000 OR OVER IN 1910.

1	Chicago, Ill.....	\$115,356	\$159,307	\$15,000	\$46,449	\$336,112
2	St. Louis, Mo.....	57,792	31,766	5,495	44,858	139,911
3	Cleveland, Ohio.....	60,185	27,012	12,162	10,569	109,928
4	Baltimore, Md.....		23,332			23,332
5	Detroit, Mich.....		25,580	10,871	9,422	45,873
6	Buffalo, N. Y.....	3,870	33,823	4,492		42,185
7	San Francisco, Cal.....		72,447		13,419	85,866
8	Milwaukee, Wis.....		19,148	2,334	42,442	63,924
9	Newark, N. J.....	13,500	123,246	27,397		164,233
10	New Orleans, La.....	21,472	15,756			37,228
11	Washington, D. C.....	38,503	21,363			59,866
12	Los Angeles, Cal.....		8,234			8,234
13	Minneapolis, Minn.....		2,154	1,000		3,214

GROUP II.—CITIES HAVING A POPULATION OF 100,000 TO 300,000 IN 1910.

14	Jersey City, N. J.....		\$16,306	\$1,238		\$17,544
15	Providence, R. I.....		39,230			39,230
16	St. Paul, Minn.....			1,933		1,933
17	Portland, Oreg.....		4,460		\$12,514	16,974
18	Columbus, Ohio.....	\$2,890	634			3,524
19	Toledo, Ohio.....					
20	Oakland, Cal.....		10,151			10,151
21	Syracuse, N. Y.....		6,079	410		6,489
22	New Haven, Conn.....		7,169	2,000		9,169
23	Birmingham, Ala.....					
24	Memphis, Tenn.....		1,993			1,993
25	Scranton, Pa.....		12,100			12,100
26	Paterson, N. J.....		8,156			8,156
27	Omaha, Nebr.....		5,465			5,465
28	Grand Rapids, Mich.....		8,571	1,476	4,173	14,220
29	Nashville, Tenn.....		2,366			2,366
30	Lowell, Mass.....		23,863			23,863
31	Cambridge, Mass.....		15,832	1,657		17,489
32	Spokane, Wash.....		1,482			1,482
33	Albany, N. Y.....		10,069			10,069

GROUP III.—CITIES HAVING A POPULATION OF 50,000 TO 100,000 IN 1910.

34	Hartford, Conn.....		\$19,787	\$4,217		\$24,004
35	Trenton, N. J.....		6,296		\$13,733	20,029
36	New Bedford, Mass.....	\$13,668	6,771			20,439
37	Reading, Pa.....		5,156			5,156
38	Camden, N. J.....		2,766			2,766
39	Dallas, Tex.....		1,840			1,840
40	Springfield, Mass.....		13,187		3,770	16,957
41	Wilmington, Del.....		1,643			1,643
42	Des Moines, Iowa.....		1,001	3,227		4,228
43	Lawrence, Mass.....		12,654	1,096		13,750
44	Tacoma, Wash.....					
45	Kansas City, Kans.....					
46	St. Joseph, Mo.....					
47	Troy, N. Y.....		3,236			3,236
48	Utica, N. Y.....		3,467			3,467

TABLE 19.—Showing total cost of instruction, operation, and maintenance of normal, evening, vacation, and special schools in 103 cities of 30,000 population and over, 1909—Continued.

GROUP III.—CITIES HAVING A POPULATION OF 50,000 TO 100,000 IN 1910—Continued.

	Cities.	Normal schools.	Evening schools.	Vacation schools.	Special schools.	Total.
49	Elizabeth, N. J.....	\$2,453	\$9,683	.....	.....	\$12,136
50	Schenectady, N. Y.....	.....	3,893	.....	.....	3,893
51	Hoboken, N. J.....	.....	7,746	.....	.....	7,746
52	Manchester, N. H.....	.....	1,931	.....	.....	1,931
53	Evansville, Ind.....	.....	906	.....	.....	906
54	Norfolk, Va.....	.....	812	.....	.....	812
55	Wilkes-Barre, Pa.....	.....	1,429	.....	.....	1,429
56	Peoria, Ill.....	.....	970	.....	.....	970
57	Erie, Pa.....	1,584	1,465	.....	.....	3,049
58	Savannah, Ga.....	.....	1,515	.....	.....	1,515
59	Oklahoma, Okla.....	.....	1,556	.....	.....	1,556
60	Harrisburg, Pa.....	1,023	747	.....	.....	1,770
61	Charleston, S. C.....	.....	.....	.....	.....	.....
62	Portland, Me.....	.....	1,348	.....	.....	1,348
63	East St. Louis, Ill.....	.....	832	.....	.....	832
64	Holyoke, Mass.....	.....	7,813	.....	.....	7,813
65	Jacksonville, Fla.....	.....	.....	.....	.....	.....
66	Brockton, Mass.....	.....	5,178	.....	.....	5,178
67	Bayonne, N. J.....	.....	5,691	.....	.....	5,691
68	Johnstown, Pa.....	.....	.....	.....	.....	.....
69	Passaic, N. J.....	.....	5,426	.....	.....	5,426
70	Wichita, Kans.....	2,589	.....	.....	.....	2,589
71	Covington, Ky.....	.....	230	.....	.....	230
72	Allentown, Va.....	.....	1,100	.....	.....	1,100
73	Springfield, Ill.....	5,083	508	.....	.....	5,591
74	Saginaw, Mich.....	1,270	2,170	.....	\$1,176	4,616
75	Canton, Ohio.....	.....	.....	.....	.....	.....

GROUP IV.—CITIES HAVING A POPULATION OF 30,000 TO 50,000 IN 1910.

76	Sioux City, Iowa.....	.....	.....	.....	.....	.....
77	Lancaster, Pa.....	.....	\$2,583	.....	.....	\$2,583
78	Atlantic City, N. J.....	.....	1,241	.....	.....	1,241
79	Little Rock, Ark.....	.....	.....	.....	.....	.....
80	Rockford, Ill.....	.....	345	.....	.....	345
81	Bay City, Mich.....	.....	438	.....	\$1,112	1,550
82	York, Pa.....	.....	.....	.....	.....	.....
83	Sacramento, Cal.....	.....	10,077	.....	1,204	11,281
84	Chattanooga, Tenn.....	.....	.....	.....	.....	.....
85	Malden, Mass.....	.....	5,617	.....	.....	5,617
86	Pueblo, Colo.....	.....	.....	.....	.....	.....
87	Haverhill, Mass.....	.....	2,447	\$784	.....	3,231
88	New Britain, Conn.....	.....	3,135	.....	.....	3,135
89	Topeka, Kans.....	.....	.....	.....	.....	.....
90	Davenport, Iowa.....	.....	.....	.....	.....	.....
91	Wheeling, W. Va.....	.....	.....	.....	.....	.....
92	Chester, Pa.....	.....	.....	.....	.....	.....
93	Dubuqua, Iowa.....	.....	.....	.....	.....	.....
94	Woonsocket, R. I.....	.....	2,421	.....	.....	2,421
95	Racine, Wis.....	.....	1,600	.....	3,052	4,652
96	Knoxville, Tenn.....	.....	.....	.....	.....	.....
97	New Castle, Pa.....	.....	.....	.....	.....	.....
98	Joliet, Ill.....	.....	353	.....	.....	353
99	Auburn, N. Y.....	.....	808	.....	.....	808
100	Taunton, Mass.....	.....	3,049	.....	.....	3,049
101	Oshkosh, Wis.....	.....	563	.....	976	1,479
102	Joplin, Mo.....	.....	.....	.....	.....	.....
103	Newport, Ky.....	.....	.....	.....	.....	.....

TABLE 20.—Showing combined expenses of instruction, operation, and maintenance of schools of all kinds in 103 cities of 30,000 population and over, 1909.

Cities.	Salaries of teachers.	Salaries and ex-penses of supervisors.	Text-books, stationery, and general school supplies.	Janitors, engineers, and firemen.	Fuel.	Water.	Light and power.	Janitors' supplies and sundry expenses.	Apparatus and manual training equipment.	School libraries.	Repairs and replacements of equip-ment.	Repairs to build-ings.	Total.
Grand total.....	\$38,865,622	\$1,214,245	\$1,847,202	\$3,902,220	\$1,756,634	\$113,302	\$249,987	\$830,746	\$386,896	\$89,743	\$485,931	\$3,192,316	\$52,944,844
Group I.....	21,172,364	523,011	897,403	2,103,590	797,226	52,423	140,041	444,919	184,216	37,845	265,709	1,816,099	28,434,846
Group II.....	7,804,582	241,334	358,725	780,702	402,671	27,714	39,363	140,652	101,998	30,097	69,020	586,149	10,583,007
Group III.....	7,146,568	314,118	460,693	720,221	389,069	22,033	50,911	159,918	73,020	16,072	102,322	575,330	10,030,275
Group IV.....	2,742,108	135,782	130,381	297,707	167,668	11,132	19,672	85,257	27,662	5,729	58,880	214,738	3,896,716

EXPENSES OF CITY SCHOOL SYSTEMS.

GROUP I.—CITIES HAVING A POPULATION OF 300,000 OR OVER IN 1910.

1	Chicago, Ill.....	\$6,579,729	\$27,900	\$207,143	\$762,188	\$292,479	.....	\$46,532	\$38,337	\$17,237	\$8,449	\$757,688	\$8,770,063
2	St. Louis, Mo.....	1,895,900	41,972	110,184	189,283	44,229	\$5,902	36,465	8,165	1,643	11,714	91,450	2,453,692
3	Cleveland, Ohio.....	1,478,793	140,335	24,723	178,623	68,298	.....	93,044	7,986	.....	6,988	114,312	2,128,337
4	Baltimore, Md.....	1,273,175	7,195	92,196	120,448	59,596	.....	483	6,052	.....	11,122	130,554	1,712,291
5	Detroit, Mich.....	1,262,231	13,500	55,830	141,773	47,750	.....	38,209	36,997	.....	.....	45,440	1,642,188
6	Buffalo, N. Y.....	994,591	128,375	62,749	93,279	47,205	14,550	44,210	15,904	5,720	33,205	86,977	1,539,859
7	San Francisco, Cal.....	1,306,529	.....	8,697	145,379	10,552	14,000	42,647	3,972	.....	19,777	68,622	1,624,408
8	Milwaukee, Wis.....	937,159	21,595	18,907	71,325	47,678	12,419	5,091	24,495	4,307	.....	99,371	1,253,622
9	Newark, N. J.....	1,382,722	27,334	72,659	101,878	36,071	5,402	16,569	9,315	.....	69,556	98,619	1,836,555
10	New Orleans, La.....	631,103	13,200	50,472	42,866	7,842	.....	61,723	.....	.....	26,836	78,211	913,353
11	Washington, D. C.....	1,374,587	84,607	84,331	104,377	74,694	.....	19,918	21,780	5,150	10,746	191,444	1,960,019
12	Los Angeles, Cal.....	1,036,209	.....	15,531	62,538	16,983	150	18,734	8,470	3,788	10,099	53,411	1,234,078
13	Minneapolis, Minn.....	1,020,636	16,988	93,981	89,633	43,869	.....	21,294	2,743	.....	57,227	.....	1,346,381

GROUP II.—CITIES HAVING A POPULATION OF 100,000 TO 300,000 IN 1910.

14	Jersey City, N. J.....	\$715,866	\$9,686	\$31,588	\$54,842	\$34,820	.....	\$5,764	\$17,811	\$170	\$5,514	\$45,655	\$924,400
15	Providence, R. I.....	632,152	11,458	40,182	65,126	50,507	\$5,485	4,364	.....	812	7,583	80,668	901,568
16	St. Paul, Minn.....	550,784	8,225	2,000	96,555	26,252	4,431	17,361	.....	8,036	.....	26,023	739,667
17	Portland, Oreg.....	495,255	.....	17,557	33,682	9,812	2,757	5,322	12,959	84	.....	46,769	627,372
18	Columbus, Ohio.....	429,719	81,373	17,278	53,520	23,769	.....	4,603	11,996	11,018	10,331	17,350	660,962

19	Toledo, Ohio.....	480,175	4,000	25,440	28,229	26,731	.....	1,784	24,449	14,169	.....	6,823	9,693	621,493
20	Oakland, Cal.....	460,356	.....	11,869	29,807	5,621	2,206	1,959	5,388	6,821	3,457	11,865	31,755	571,104
21	Syracuse, N. Y.....	402,174	1,200	15,389	38,077	33,651	.....	4,164	12,477	3,465	.....	.....	22,651	533,248
22	New Haven, Conn.....	374,831	37,450	20,433	45,939	25,552	.....	2,595	10,231	1,475	2,270	1,167	7,373	529,316
23	Birmingham, Ala.....	107,433	14,533	982	9,819	4,469	777	890	1,715	2,300	270	204	5,411	148,753
24	Memphis, Tenn.....	206,081	8,110	9,932	22,019	5,893	1,593	500	3,009	.....	227	7,135	6,841	271,290
25	Scranton, Pa.....	363,589	.....	34,705	44,592	20,647	5,573	1,100	2,972	.....	.....	.....	16,185	509,363
26	Paterson, N. J.....	384,826	1,000	11,100	26,670	8,572	1,095	400	2,167	.....	.....	4,057	56,848	496,735
27	Omaha, Nebr.....	363,589	.....	19,843	40,141	21,592	.....	966	7,038	6,334	.....	2,333	34,890	516,726
28	Grand Rapids, Mich.....	346,647	48,175	15,897	33,215	12,754	1,600	3,698	2,263	4,821	610	2,691	44,691	517,062
29	Nashville, Tenn.....	197,469	5,300	4,893	14,385	3,667	710	.....	2,954	.....	200	1,676	28,940	260,214
30	Lowell, Mass.....	273,518	.....	14,152	46,012	20,637	1,487	4,576	2,424	306	.....	377	40,513	404,002
31	Cambridge, Mass.....	346,479	1,192	12,006	42,360	28,598	.....	3,116	3,846	12,385	.....	4,682	29,539	484,203
32	Spokane, Wash.....	370,904	4,932	34,402	34,447	20,224	.....	1,973	19,222	6,659	1,547	.....	17,241	511,641
33	Albany, N. Y.....	262,675	4,700	19,127	21,265	18,908	.....	2,552	3,078	497	1,396	2,582	17,113	353,888

GROUP III.—CITIES HAVING A POPULATION OF 50,000 TO 100,000 IN 1910.

34	Hartford, Conn.....	\$331,885	\$36,040	\$29,022	\$33,315	\$21,770	\$3,119	\$5,717	\$19,744	.....	\$1,744	\$3,882	\$23,586	\$509,824
35	Trenton, N. J.....	293,507	5,305	19,053	22,540	13,089	.....	1,665	10,318	88,178	180	2,735	9,491	386,061
36	New Bedford, Mass.....	210,989	8,945	17,069	24,543	16,277	.....	1,004	4,300	1,666	.....	1,150	19,456	305,399
37	Reading, Pa.....	196,238	1,595	15,944	28,248	11,614	.....	400	3,592	822	.....	3,500	7,599	269,552
38	Camden, N. J.....	285,617	1,000	23,603	34,603	12,924	369	763	2,902	6,023	.....	8,906	24,116	400,826
39	Dallas, Tex.....	162,497	30,113	2,992	14,103	5,439	.....	.....	853	1,659	1,051	4,664	.....	223,971
40	Springfield, Mass.....	317,879	29,112	25,976	37,450	29,136	.....	5,798	11,885	6,320	.....	2,906	17,159	483,621
41	Wilmington, Del.....	173,075	.....	10,619	13,450	9,987	.....	.....	2,014	1,058	.....	.....	15,780	225,983
42	Des Moines, Iowa.....	324,212	14,067	30,760	37,011	18,410	2,436	1,357	2,617	6,000	.....	.....	32,733	469,633
43	Lawrence, Mass.....	199,885	8,420	11,369	19,720	15,065	.....	2,859	4,925	.....	.....	269	13,972	276,484
44	Tacoma, Wash.....	240,638	27,131	15,032	21,702	10,134	1,634	758	6,130	4,286	599	5,922	5,497	339,403
45	Kansas City, Kans.....	180,377	.....	5,935	17,876	9,179	1,626	1,379	2,764	3,365	212	1,138	10,831	234,682
46	St. Joseph, Mo.....	192,532	4,410	3,945	29,369	10,055	32	2,055	154	1,976	650	.....	8,843	254,021
47	Troy, N. Y.....	192,270	7,623	7,307	21,623	16,829	16	1,599	3,784	533	2,645	6,729	26,425	297,382
48	Utica, N. Y.....	189,442	.....	6,162	21,311	14,561	.....	2,364	5,585	137	117	336	9,574	249,609
49	Elizabeth, N. J.....	143,584	2,700	15,732	13,913	6,471	684	2,264	1,708	.....	90	7,592	6,015	199,753
50	Schenectady, N. Y.....	174,480	7,130	4,927	10,941	10,790	.....	2,817	1,369	1,779	1,393	.....	15,867	231,193
51	Hoboken, N. J.....	249,760	.....	16,664	17,381	7,156	1,263	2,008	4,043	1,740	.....	1,530	32,277	333,822
52	Manchester, N. H.....	111,169	.....	6,620	7,735	11,477	1,330	918	1,596	599	.....	1,706	7,562	150,711
53	Evansville, Ind.....	155,718	.....	3,524	17,948	5,718	.....	161	4,717	490	.....	496	13,140	223,718
54	Norfolk, Va.....	110,858	.....	2,508	12,691	3,145	.....	531	1,192	647	.....	1,606	5,462	138,640
55	Wilkes-Barre, Pa.....	147,323	2,250	15,356	.....	7,954	547	656	1,984	785	.....	14,039	16,444	207,338

TABLE 20.—Showing combined expenses of instruction, operation, and maintenance of schools of all kinds in 103 cities of 30,000 population and over, 1909—Continued.

EXPENSES OF CITY SCHOOL SYSTEMS.

GROUP III.—CITIES HAVING A POPULATION OF 50,000 TO 100,000 IN 1910.

	Cities.	Salaries of teachers.	Salaries and expenses of supervisors.	Text-books, stationery, and general school supplies.	Janitors, engineers, and firemen.	Fuel.	Water.	Light and power.	Janitors' supplies and sundry expenses.	Apparatus and manual training equipment.	School libraries.	Repairs and replacements of equipment.	Repairs to buildings.	Total.
56	Peoria, Ill.	\$195,386	\$9,107	\$3,735	\$16,745	\$6,659	.....	\$821	\$470	\$4,388	.....	.....	\$12,316	\$249,627
57	Elie, Pa.	122,298	20,873	12,701	16,335	9,023	.....	1,839	2,969	185	.....	\$1,089	4,851	192,173
58	Savannah, Ga.	106,355	1,500	.....	4,929	1,809	.....	109	598	679	.....	.....	1,887	117,866
59	Oklahoma, Okla.	133,301	5,000	8,988	9,920	3,525	.....	.....	.....	.....	.....	6,520	10,240	177,494
60	Harrisburg, Pa.	158,995	2,800	20,988	20,859	9,000	\$308	1,275	829	2,268	.....	6,100	12,140	235,562
61	Charleston, S. C.	58,301	.....	262	1,600	.....	.....	.....	10,781	.....	.....	.....	3,947	74,891
62	Portland, Me.	170,295	4,300	12,997	21,330	12,123	199	1,208	2,607	1,294	\$536	1,112	17,212	245,213
63	East St. Louis, Ill.	104,555	22,893	4,703	21,067	3,931	1,991	524	1,583	1,199	1,064	1,536	7,161	172,207
64	Holyoke, Mass.	159,663	4,286	11,315	16,459	12,014	1,565	2,922	3,455	.....	.....	2,421	21,419	235,499
65	Jacksonville, Fla.	57,436	.....	.....	2,773	842	.....	.....	2,223	136	.....	2,315	6,103	71,828
66	Brockton, Mass.	169,860	3,000	18,488	18,121	15,522	742	837	6,007	895	275	.....	10,959	244,706
67	Bayonne, N. J.	198,910	2,340	17,133	15,702	6,494	.....	.....	8,995	758	.....	3,497	21,005	274,834
68	Johnstown, Pa.	111,111	4,700	11,444	13,822	4,270	1,699	108	.....	.....	.....	.....	26,133	173,287
69	Passaic, N. J.	146,841	.....	12,809	11,698	7,020	491	1,866	3,007	2,605	58	600	11,121	198,116
70	Wichita, Kans.	90,786	3,653	3,197	8,238	3,577	.....	.....	4,974	491	.....	1,781	14,866	131,563
71	Covington, Ky.	90,315	5,030	166	8,280	2,005	403	617	1,994	.....	.....	410	13,962	123,182
72	Allentown, Pa.	99,887	1,545	8,264	10,776	5,797	.....	425	3,389	.....	410	809	16,709	148,011
73	Springfield, Ill.	127,116	6,484	574	11,098	3,984	.....	217	4,955	4,692	.....	3,166	14,814	177,100
74	Saginaw, Mich.	154,297	5,200	8,580	19,796	9,315	1,580	1,014	2,471	5,367	4,448	1,541	12,352	225,961
75	Canton, Ohio	106,925	3,760	14,230	13,320	4,959	.....	26	435	.....	.....	310	5,604	149,569

GROUP IV.—CITIES HAVING A POPULATION OF 30,000 TO 50,000 IN 1910.

76	Sioux City, Iowa.	\$138,244	\$1,700	\$2,844	\$17,162	\$11,080	\$999	\$270	\$3,794	.....	.....	.....	\$13,446	\$189,539
77	Lancaster, Pa.	84,273	.....	.....	12,000	6,142	605	526	4,157	\$6,741	.....	\$4,552	9,939	128,935
78	Atlantic City, N. J.	111,573	.....	11,999	9,991	10,736	3,500	.....	18,338	.....	.....	.....	11,090	177,227
79	Little Rock, Ark.	87,963	3,300	2,947	6,662	4,084	1,092	565	1,189	.....	.....	2,300	3,578	113,680
80	Rockford, Ill.	105,882	4,896	881	15,979	9,570	.....	1,243	4,785	2,491	.....	96	13,513	159,336

81	Bay City, Mich.....	108,348	14,380	6,000	12,045	5,370	732	323	1,642	398	10,355	159,623
82	York, Pa.....	93,242	2,206	10,247	11,566	6,149	918	945	958	7,589	133,909
83	Sacramento, Cal.....	164,449	5,500	7,871	15,126	1,809	1,468	3,835	1,536	1,111	2,432	7,097	212,244
84	Chattanooga, Tenn.....	67,253	1,513	8,834	1,982	306	78	1,482	5,348	81,796
85	Malden, Mass.....	158,351	3,380	13,196	15,813	15,997	1,797	895	678	9,245	219,352
86	Pueblo, Colo.....	128,499	8,004	5,673	15,325	4,709	435	690	1,377	.....	50	2,802	6,005	173,559
87	Haverhill, Mass.....	126,155	2,450	9,175	11,927	8,911	.....	803	615	924	.....	946	10,257	172,163
88	New Britain, Conn.....	81,246	5,234	10,688	9,375	8,076	.....	2,046	786	.....	727	.....	3,014	121,292
89	Topeka, Kans.....	148,308	1,710	3,350	15,246	8,162	214	1,701	990	1,773	270	772	11,268	193,764	
90	Davenport, Iowa.....	117,567	29,727	1,268	15,754	5,939	.....	423	1,329	3,303	358	8,564	23,997	208,229
91	Wheeling, W. Va.....	95,436	15,725	1,696	6,660	4,415	.....	1,043	3,132	1,040	.....	1,596	12,232	142,975
92	Chester, Pa.....	78,880	5,111	11,042	19,049	114,082
93	Dubuque, Iowa.....	77,097	6,850	701	8,415	5,272	783	432	531	1,400	478	450	7,849	110,253	
94	Woonsocket, R. I.....	61,557	2,350	4,856	7,114	7,106	519	252	1,028	95	265	973	5,823	91,928	
95	Racine, Wis.....	102,142	6,461	2,289	9,801	4,773	.....	1,076	1,209	3,858	873	1,081	2,986	136,490
96	Knoxville, Tenn.....	57,604	665	898	5,204	1,198	244	65	744	.....	.....	3,446	4,031	74,099
97	New Castle, Pa.....	94,581	3,330	10,254	11,040	3,060	30	979	3,721	.....	.....	95	9,882	136,972
98	Joliet, Ill.....	77,147	2,446	3,111	11,563	5,282	.....	609	1,314	84	167	695	5,343	107,761
99	Auburn, N. Y.....	86,698	2,800	2,293	8,030	6,694	408	432	800	1,419	122	.....	3,007	112,703
100	Taunton, Mass.....	93,803	2,600	4,528	10,200	11,755	347	283	5,042	184	.....	.....	6,763	135,505
101	Oshkosh, Wis.....	69,217	6,299	2,328	8,373	5,266	.....	1,232	790	1,314	1,261	2,749	3,010	101,839
102	Joplin, Mo.....	72,953	1,280	3,631	6,210	2,673	.....	154	1,554	1,500	47	23,297	.....	113,279
103	Newport, Ky.....	53,540	2,450	1,023	6,240	1,458	.....	247	1,138	.....	.....	.....	8,071	74,167

1 Estimate.

TABLE 21.—Showing miscellaneous expenses of school systems in 103 cities of 30,000 population and over, 1909.

City.	School census and elections.	Truant officers and police.	Medical inspection and nurses.	Pensions.	Rent.	Insurance.	Transportation of pupils.	Payments to schools and institutions.	Other miscellaneous expenses.	Total.
Grand total.....	\$73,029	\$204,240	\$100,333	\$108,433	\$241,005	\$153,588	\$32,910	\$420,644	\$118,730	\$1,517,912
Group I.....	34,583	107,779	63,038	122,727	167,190	22,566	13,284	305,389	54,042	890,578
Group II.....	16,262	30,900	14,709	21,291	34,493	49,929	668	37,793	45,842	251,887
Group III.....	15,386	45,967	18,647	24,415	32,357	59,401	13,860	62,077	6,415	278,545
Group IV.....	6,798	19,574	3,939	.....	6,965	28,692	5,118	15,385	12,431	96,902

GROUP I.—CITIES HAVING A POPULATION OF 300,000 OR OVER IN 1910.										
1 Chicago, Ill.....	85,278	\$46,884	\$24,700	\$67,883	\$52,160	\$99	\$8,991	\$122,481	\$33,070	\$381,546
2 St. Louis, Mo.....	4,500	14,667	2,500	.....	4,159	2,256	4,058	73,243	8,029	113,412
3 Cleveland, Ohio.....	3,583	9,553	.....	6,178	1,606	1,014	.....	33,126	.....	55,060
4 Baltimore, Md.....	.....	9,020	6,000	.....	47,089	1,155	.....	9,007	1,825	73,096
5 Detroit, Mich.....	4,522	8,000	6,750	12,532	2,750	194	.....	.....	.....	34,748
6 Buffalo, N. Y.....	.....	7,840	2,600	15,057	4,875	5,939	.....	13,138	.....	49,449
7 San Francisco, Cal.....	8,127	.....	.....	6,020	7,513	.....	.....	28,308	589	50,557
8 Milwaukee, Wis.....	2,197	5,280	.....	.....	1,920	.....	215	.....	2,593	12,175
9 Newark, N. J.....	.....	.....	7,247	15,057	5,649	2,180	.....	14,036	6,457	50,626
10 New Orleans, La.....	.....	.....	3,900	.....	9,000	.....	.....	.....	1,479	14,439
11 Washington, D. C.....	.....	2,265	6,091	.....	23,805	.....	.....	12,050	.....	44,311
12 Los Angeles, Cal.....	6,376	2,000	3,250	.....	5,254	3,520	.....	.....	.....	20,400
13 Minneapolis, Minn.....	.....	2,200	.....	.....	1,350	7,209	.....	.....	.....	10,759

GROUP II.—CITIES HAVING A POPULATION OF 100,000 TO 300,000 IN 1910.										
14 Jersey City, N. J.....	\$1,867	\$2,125	\$1,833	\$3,697	.....	\$6,915	.....	.....	\$1,608	\$18,173
15 Providence, R. I.....	.....	3,752	1,565	7,308	\$625	154	.....	\$5,822	208	21,498
16 St. Paul, Minn.....	.....	900	.....	.....	2,047	305	.....	.....	.....	3,252
17 Portland, Oreg.....	445	1,200	803	.....	610	10,639	.....	.....	16,576	30,273
18 Columbus, Ohio.....	1,616	1,660	.....	.....	.....	.....	.....	4,804	.....	8,070
19 Toledo, Ohio.....	1,012	2,806	.....	.....	.....	.....	.....	.....	.....	3,818
20 Oakland, Cal.....	2,512	720	.....	.....	40	587	.....	.....	.....	3,859

21	Syracuse, N. Y.	1,920	4,131	5,041	1,620	1,953	.....	10,245	15,800	40,410
22	New Haven, Conn.	1,337	1,770	.....	3,474	5,546	.....	.....	.....	13,029
23	Birmingham, Ala.	.....	.....	.....	492	3,028	.....	1,075	.....	5,138
24	Memphis, Tenn.	.....	.....	.....	1,639	4,084	.....	.....	.....	6,840
25	Scranton, Pa.	1,179	.....	.....	8,127	1,614	.....	.....	.....	10,920
26	Paterson, N. J.	.....	1,500	3,078	13,267	264	.....	948	.....	19,057
27	Omaha, Nebr.	2,309	.....	.....	228	2,072	.....	375	.....	6,280
28	Grand Rapids, Mich.	1,836	.....	.....	646	.....	.....	.....	281	4,083
29	Nashville, Tenn.	875	500	.....	1,200	4,864	.....	.....	.....	7,439
30	Lowell, Mass.	.....	.....	.....	1,278	1,344	8325	11,707	1,056	19,001
31	Cambridge, Mass.	537	2,607	1,528	.....	170	324	2,735	.....	11,551
32	Spokane, Wash.	691	.....	.....	.....	4,390	.....	.....	10,621	16,782
33	Albany, N. Y.	1,674	.....	639	.....	.....	19	82	.....	2,414

GROUP III.—CITIES HAVING A POPULATION OF 50,000 TO 100,000 IN 1910.

34	Hartford, Conn.	\$1,133	\$1,350	\$1,800	.....	\$2,200	\$7,011	.....	.....	\$14,224
35	Trenton, N. J.	.....	1,185	1,289	.....	4,170	2,468	.....	.....	14,182
36	New Bedford, Mass.	555	3,419	.....	.....	2,261	.....	509	.....	15,124
37	Reading, Pa.	.....	720	107	.....	.....	964	.....	.....	2,991
38	Camden, N. J.	.....	2,880	2,400	.....	116	672	.....	.....	10,065
39	Dallas, Tex.	846	.....	.....	.....	575	1,584	.....	.....	3,005
40	Springfield, Mass.	450	2,375	2,846	.....	.....	.....	1,129	543	7,343
41	Wilmington, Del.	279	.....	.....	.....	264	363	.....	.....	906
42	Des Moines, Iowa.	694	1,485	790	.....	.....	1,783	882	2,413	12,435
43	Lawrence, Mass.	722	3,500	2,500	.....	1,380	250	.....	2,200	11,266
44	Tacoma, Wash.	1,405	720	.....	.....	.....	3,232	.....	1,754	7,111
45	Kansas City, Kans.	540	936	.....	.....	.....	1,239	.....	.....	2,715
46	St. Joseph, Mo.	1,292	900	420	.....	378	452	.....	.....	3,442
47	Troy, N. Y.	80	1,500	.....	.....	1,940	595	.....	200	24,481
48	Utica, N. Y.	.....	1,800	.....	.....	2,860	4,435	.....	17,487	9,095
49	Elizabeth, N. J.	.....	400	950	.....	700	2,037	34	1,225	6,493
50	Schenectady, N. Y.	.....	1,590	900	.....	.....	30	.....	.....	5,266
51	Hoboken, N. J.	.....	2,200	.....	.....	1,500	2,140	1,502	500	10,676
52	Manchester, N. H.	973	1,160	.....	.....	128	822	.....	.....	3,073
53	Evansville, Ind.	450	840	.....	.....	250	460	.....	421	2,421
54	Norfolk, Va.	.....	.....	.....	.....	1,755	25	.....	.....	1,780
55	Wilkes-Barre, Pa.	.....	415	.....	.....	.....	900	.....	.....	1,315
56	Peoria, Ill.	509	720	.....	.....	1,084	3,032	.....	.....	5,400
57	Erie, Pa.	393	1,140	.....	.....	.....	3,826	.....	172	5,531
58	Savannah, Ga.	793	.....	.....	.....	198	376	.....	.....	1,367

TABLE 21.—Showing miscellaneous expenses of school systems in 103 cities of 30,000 population and over, 1909—Continued.

GROUP III.—CITIES HAVING A POPULATION OF 50,000 TO 100,000 IN 1910—Continued.

	City.	School census and elections.	Truant officers and police.	Medical inspection and nurses.	Pensions.	Rent.	Insurance.	Transportation of pupils.	Payments to schools and institutions.	Other miscellaneous expenses.	Total.
59	Oklahoma, Okla.	\$32	\$1,350			\$468	\$4,588				\$6,428
60	Harrisburg, Pa.		570	\$850	\$3,872		526		\$670		6,488
61	Charleston, S. C.				1,492		1,187		23,089		25,748
62	Portland, Me.	1,063	873			135	3,831	\$1,741			7,643
63	East St. Louis, Ill.	1,280	2,074			2,206	1,738				7,308
64	Holyoke, Mass.	197	2,846	900		890		738	393		5,964
65	Jacksonville, Fla.					65	538	6,495	358		7,456
66	Brockton, Mass.	371	715	1,470				100	58		2,714
67	Bayonne, N. J.		1,000	625		2,619	716				4,960
68	Johnstown, Pa.		450			75	1,324				1,849
69	Passaic, N. J.		800	800	838	600	901		572		4,511
70	Wichita, Kans.		450			368	368		420		1,606
71	Covington, Ky.	547	1,474			2,532	378				4,931
72	Allentown, Pa.		900				1,316				2,216
73	Springfield, Ill.	73	780			660	519				1,959
74	Saginaw, Mich.	402					2,030		1,000		3,432
75	Canton, Ohio	370	480				765				1,615

GROUP IV.—CITIES HAVING A POPULATION OF 30,000 TO 50,000 IN 1910.

76	Sioux City, Iowa.		\$600			\$432	\$3,385	\$1,448			\$5,865
77	Lancaster, Pa.		1,100	\$500			108		\$800	\$750	3,258
78	Atlantic City, N. J.		1,890	1,200							3,090
79	Little Rock, Ark.	\$325					2,785				3,110
80	Rockford, Ill.	175	400								575
81	Bay City, Mich.	573	1,272				484				2,329
82	York, Pa.		405				1,751			1,100	3,256
83	Sacramento, Cal.	596	1,063			1,270	1,253				4,182
84	Chattanooga, Tenn.	133				297	268		225	12	985
85	Malden, Mass.	298	1,000	530					233		2,061

86	Pueblo, Colo.....	810	1,350	.....	.....	.....	1,795	.....	.....	73	4,028
87	Haverhill, Mass.....	138	796	.....	.....	.....	1,875	.....	512	.....	6,876
88	New Britain, Conn.....	302	700	.....	.....	.....	1,807	.....	13,238	.....	16,449
89	Topeka, Kans.....	239	360	.....	.....	.....	2,359	.....	.....	.....	2,968
90	Davenport, Iowa.....	242	600	.....	.....	.....	1,295	.....	.....	9,077	11,214
91	Wheeling, W. Va.....	290	900	.....	.....	.....	20	.....	.....	.....	2,268
92	Chester, Pa.....	.....	660	.....	.....	.....	.....	.....	.....	.....	660
93	Dubuque, Iowa.....	406	360	.....	.....	.....	86	.....	.....	.....	1,452
94	Woonsocket, R. I.....	329	1,562	.....	.....	.....	285	.....	.....	.....	2,430
95	Racine, Wis.....	165	.....	.....	.....	.....	.....	.....	.....	.....	165
96	Knoxville, Tenn.....	.....	.....	.....	.....	.....	.....	.....	43	.....	1,626
97	New Castle, Pa.....	.....	405	.....	.....	.....	1,007	.....	.....	.....	2,675
98	Joliet, Ill.....	189	396	.....	.....	.....	2,131	.....	.....	.....	1,667
99	Auburn, Mass.....	427	500	.....	.....	.....	553	.....	.....	1,419	3,696
100	Taunton, Mass.....	240	750	.....	.....	.....	564	.....	334	.....	4,190
101	Oakosh, Wis.....	152	585	.....	.....	.....	656	.....	.....	.....	2,550
102	Joplin, Mo.....	403	720	.....	.....	.....	1,813	.....	.....	.....	1,123
103	Newport, Ky.....	366	1,200	.....	.....	.....	412	.....	.....	.....	2,214

TABLE 22.—Showing expenses of instruction, operation, and maintenance of kindergartens in 103 cities of 30,000 population and over, 1909.

	Salaries of teachers.	Salaries and expenses of supervisors.	Text-books, stationery, and general school supplies.	Other current expenses.	Total.
Grand total.....	\$1,205,978	\$18,271	\$39,549	\$30,543	\$1,294,341
Group I.....	771,872	11,717	25,551	12,092	821,232
Group II.....	208,850	2,904	5,443	6,800	223,997
Group III.....	170,142	2,800	7,036	11,019	190,997
Group IV.....	55,114	850	1,519	632	58,115

GROUP I.—CITIES HAVING A POPULATION OF 300,000 AND OVER IN 1910.

1	Chicago, Ill.....	\$198,403	.....	\$6,117	\$5,253	\$209,773
2	St. Louis, Mo.....	152,358	\$5,762	3,937	744	162,801
3	Cleveland, Ohio.....	53,009	1,500	2,111	2,892	59,512
4	Baltimore, Md.....	.....	.....	.....	.....	.....
5	Detroit, Mich.....	96,835	.....	3,906	.....	100,741
6	Buffalo, N. Y.....	23,470	1,200	958	1,556	27,184
7	San Francisco, Cal.....	.....	.....	.....	.....	.....
8	Milwaukee, Wis.....	63,650	.....	.....	.....	63,650
9	Newark, N. J.....	.....	.....	.....	.....	.....
10	New Orleans, La.....	38,500	.....	3,200	.....	41,700
11	Washington, D. C.....	71,230	3,255	2,620	1,502	78,607
12	Los Angeles, Cal.....	66,927	.....	2,682	110	69,719
13	Minneapolis, Minn.....	7,490	.....	20	35	7,545

GROUP II.—CITIES HAVING A POPULATION OF 100,000 TO 300,000 IN 1910.

14	Jersey City, N. J.....	.....	.....	.....	.....	.....
15	Providence, R. I.....	\$28,945	\$904	.....	.....	\$29,849
16	St. Paul, Minn.....	.....	.....	.....	.....	.....
17	Portland, Oreg.....	.....	.....	.....	.....	.....
18	Columbus, Ohio.....	.....	.....	.....	.....	.....
19	Toledo, Ohio.....	37,003	.....	\$895	\$2,755	40,653
20	Oakland, Cal.....	4,560	.....	150	.....	4,710
21	Syracuse, N. Y.....	18,000	.....	.....	.....	18,000
22	New Haven, Conn.....	19,400	1,100	643	3,719	24,862
23	Birmingham, Ala.....	.....	.....	.....	.....	.....
24	Memphis, Tenn.....	.....	.....	.....	.....	.....
25	Scranton, Pa.....	14,915	.....	2,000	.....	16,915
26	Paterson, N. J.....	.....	.....	.....	.....	.....
27	Omaha, Nebr.....	36,438	.....	1,033	.....	37,471
28	Grand Rapids, Mich.....	.....	.....	.....	.....	.....
29	Nashville, Tenn.....	.....	.....	.....	.....	.....
30	Lowell, Mass.....	12,930	.....	546	.....	13,476
31	Cambridge, Mass.....	17,809	.....	176	326	18,311
32	Spokane, Wash.....	.....	.....	.....	.....	.....
33	Albany, N. Y.....	18,850	900	.....	.....	19,750

GROUP III.—CITIES HAVING A POPULATION OF 50,000 TO 100,000 IN 1910.

34	Hartford, Conn.....	\$29,718	\$700	\$1,811	.....	\$32,229
35	Trenton, N. J.....	.....	.....	.....	.....	.....
36	New Bedford, Mass.....	.....	.....	.....	.....	.....
37	Reading, Pa.....	.....	.....	.....	.....	.....
38	Camden, N. J.....	4,000	.....	399	.....	4,399
39	Dallas, Tex.....	.....	.....	.....	.....	.....
40	Springfield, Mass.....	15,090	300	418	\$643	16,451
41	Wilmington, Del.....	.....	.....	.....	.....	.....
42	Des Moines, Iowa.....	24,368	1,800	894	5,674	32,736
43	Lawrence, Mass.....	.....	.....	.....	.....	.....
44	Tacoma, Wash.....	.....	.....	.....	.....	.....
45	Kansas City, Kans.....	450	.....	73	.....	523

TABLE 22.—Showing expenses of instruction, operation, and maintenance of kindergartens in 103 cities of 30,000 population and over, 1909—Continued.

GROUP III.—CITIES HAVING A POPULATION OF 50,000 TO 100,000 IN 1910—Continued.

		Salaries of teachers.	Salaries and expenses of supervisors.	Text-books, stationery, and general school supplies.	Other current expenses.	Total.
46	St. Joseph, Mo.....					
47	Troy, N. Y.....	\$12,653		\$762		\$13,415
48	Utica, N. Y.....	12,613			\$750	13,363
49	Elizabeth, N. J.....					
50	Schenectady, N. Y.....	6,564		547		7,111
51	Hoboken, N. J.....	15,568		650		16,218
52	Manchester, N. H.....	1,909		169	14	2,092
53	Evansville, Ind.....	7,350		104	24	7,478
54	Norfolk, Va.....					
55	Wilkes-Barre, Pa.....					
56	Peoria, Ill.....	6,829		78		6,907
57	Erie, Pa.....	1,790		143	142	2,075
58	Savannah, Ga.....					
59	Oklahoma, Okla.....	4,185				4,185
60	Harrisburg, Pa.....					
61	Charleston, S. C.....					
62	Portland, Me.....	3,675		319	3,532	7,526
63	East St. Louis, Ill.....					
64	Holyoke, Mass.....	9,136		198		9,334
65	Jacksonville, Fla.....					
66	Brockton, Mass.....					
67	Bayonne, N. J.....	6,720		471		7,191
68	Johnstown, Pa.....					
69	Passaic, N. J.....					
70	Wichita, Kans.....					
71	Covington, Ky.....	6,954			240	7,194
72	Allentown, Pa.....					
73	Springfield, Ill.....					
74	Saginaw, Mich.....					
75	Canton, Ohio.....	570				570

GROUP IV.—CITIES HAVING A POPULATION OF 30,000 TO 50,000 IN 1910.

76	Sioux City, Iowa.....					
77	Lancaster, Pa.....					
78	Atlantic City, N. J.....					
79	Little Rock, Ark.....					
80	Rockford, Ill.....					
81	Bay City, Mich.....					
82	York, Pa.....					
83	Sacramento, Cal.....	\$10,440		\$107	\$120	\$10,667
84	Chattanooga, Tenn.....					
85	Malden, Mass.....					
86	Pueblo, Colo.....	7,963		253		8,216
87	Haverhill, Mass.....	3,355				3,355
88	New Britain, Conn.....	5,574		222		5,796
89	Topeka, Kans.....	1,080			45	1,125
90	Davenport, Iowa.....					
91	Wheeling, W. Va.....					
92	Chester, Pa.....					
93	Dubuque, Iowa.....	4,550	\$850	143		5,543
94	Woonsocket, R. I.....	2,372		220	466	3,058
95	Racine, Wis.....	7,680		272		7,952
96	Knoxville, Tenn.....					
97	New Castle, Pa.....					
98	Joliet, Ill.....					
99	Auburn, N. Y.....	3,225			1	3,226
100	Taunton, Mass.....					
101	Oshkosh, Wis.....	8,875		302		9,177
102	Joplin, Mo.....					
103	Newport, Ky.....					

TABLE 23.—Showing for each item of expense of general control the percentage of total expenses, based on Table 16.

Cities.	Board of education.		Finance offices.		Superintendent's office.		Other overhead expenses.		Total.	
	Percentage.	Rank.	Percentage.	Rank.	Percentage.	Rank.	Percentage.	Rank.	Percentage.	Rank.
Group I: Median.....	0.69	6	0.40	3	0.90	7	0.42	4	2.56	7
Middle, 50 per cents...	{ .345 to 1.30	{ 4 to 8	{ to	{ to	{ .67 to 1.80	{ 3 to 8	{ to	{ to	{ 1.80 to 3.69	{ 4 to 10
Group II: Median.....	.76	5+	.66	5	1.295	10+	.50	7+	2.415	10+
Middle, 50 per cents....	{ .485 to .855	{ 4 to 6	{ .13 to 1.12	{ 3 to 7	{ .87 to 1.97	{ 6 to 13	{ .27 to .575	{ 5 to 9	{ 1.88 to 3.30	{ 5 to 14
Group III: Median.....	1.325	12+	.70	9+	1.78	21	.54	11	3.28	19+
Middle, 50 per cents....	{ .84 to 1.59	{ 7 to 17	{ .23 to 1.40	{ 5 to 14	{ 1.50 to 2.50	{ 10 to 29	{ .12 to .92	{ 5 to 18	{ 2.62 to 4.45	{ 10 to 29
Group IV: Median.....	.71	9	1.11	6	2.47	13+	.51	9	3.78	14+
Middle, 50 per cents....	{ .25 to 1.27	{ 5 to 13	{ .36 to 1.90	{ 3 to 9	{ 2.01 to 3.07	{ 7 to 20	{ .17 to .735	{ 5 to 13	{ 2.99 to 5.00	{ 8 to 21

GROUP I.—CITIES HAVING A POPULATION OF 300,000 OR OVER IN 1910.

1	Chicago, Ill.....	0.96	7	2.11	5	0.39	2	0.34	3	3.80	11
2	St. Louis, Mo.....	6.93	11	.28	1	.26	1	.80	5	8.27	13
3	Cleveland, Ohio.....	.29	2	.34	2	2.70	11	4.70	7	8.03	12
4	Baltimore, Md.....	1.13	8	.....	.....	.84	5	.20	1	2.17	5
5	Detroit, Mich.....	.....	.....	.....	.....	1.80	9	.....	.....	1.80	4
6	Buffalo, N. Y.....	.32	3	.....	.....	.83	4	.....	.....	1.15	2
7	San Francisco, Cal.....	.69	6	.....	.....	1.77	8	.....	.....	2.46	6
8	Milwaukee, Wis.....	1.47	9	.....	.....	1.80	9	.42	4	3.69	10
9	Newark, N. J.....	1.84	10	.....	.....	1.10	7	.....	.....	2.94	9
10	New Orleans, La.....	.....	.....	.40	3	2.16	10	.....	.....	2.56	7
11	Washington, D. C.....	.65	5	.....	.....	.67	3	.22	2	1.54	3
12	Los Angeles, Cal.....	.37	4	1.10	4	.90	6	1.30	6	2.67	8
13	Minneapolis, Minn.....	.23	1	.....	.....	.67	3	.....	.....	.90	1

GROUP II.—CITIES HAVING A POPULATION OF 100,000 TO 300,000 IN 1910.

14	Jersey City, N. J.....	0.33	2	.....	.....	0.95	8	0.54	9	1.82	3
15	Providence, R. I.....	.....	.....	.....	.....	2.65	16	.61	10	3.26	13
16	St. Paul, Minn.....	.79	6	.....	.....	.94	7	.....	.....	1.73	2
17	Portland, Oreg.....	.....	.....	0.66	5	1.34	11	.....	.....	2.00	7
18	Columbus, Ohio.....	.....	.....	.89	6	.79	4	1.90	12	3.58	16
19	Toledo, Ohio.....	.58	4	.12	2	.53	1	1.96	13	3.19	12
20	Oakland, Cal.....	.....	.....	.....	.....	1.87	12	.01	1	1.88	5
21	Syracuse, N. Y.....	.79	6	.....	.....	.82	5	.26	4	1.87	4
22	New Haven, Conn.....	1.40	8	.13	3	.87	6	.16	3	2.56	11
23	Birmingham, Ala.....	.....	.....	.....	.....	4.00	18	.....	.....	4.00	17
24	Memphis, Tenn.....	.09	1	1.12	7	1.87	12	.48	7	3.56	15
25	Scranton, Pa.....	.....	.....	2.45	9	2.99	17	.30	6	5.74	18
26	Paterson, N. J.....	.92	7	.....	.....	.70	3	.....	.....	1.62	1
27	Omaha, Nebr.....	2.38	9	.27	4	1.25	10	.10	2	4.00	17
28	Grand Rapids, Mich.....	.39	3	.02	1	2.37	15	.52	8	3.30	14
29	Nashville, Tenn.....	.73	5	.....	.....	1.10	9	.52	8	2.35	9
30	Lowell, Mass.....	.....	.....	.....	.....	1.34	11	.28	5	1.62	1
31	Cambridge, Mass.....	.....	.....	.....	.....	2.24	14	.....	.....	2.24	8
32	Spokane, Wash.....	.....	.....	1.17	8	.65	2	.66	11	2.48	10
33	Albany, N. Y.....	.....	.....	.....	.....	1.97	13	.....	.....	1.97	6

GROUP III.—CITIES HAVING A POPULATION OF 50,000 TO 100,000 IN 1910.

34	Hartford, Conn.....	0.94	10	0.35	7	0.60	1	0.21	7	2.10	4
35	Trenton, N. J.....	.65	5	.....	.....	1.35	7	.....	.....	2.00	3
36	New Bedford, Mass.....	.....	.....	.....	.....	3.18	33	.....	.....	3.18	17
37	Reading, Pa.....	.....	.....	.60	9	2.80	30	.....	.....	3.40	21
38	Camden, N. J.....	.....	.....	.....	.....	2.00	22	.....	.....	2.00	3
39	Dallas, Tex.....	1.59	17	.....	.....	1.56	12	.10	4	3.25	19
40	Springfield, Mass.....	.....	.....	.....	.....	2.33	27	.59	12	2.92	14

TABLE 23.—Showing for each item of expense of general control the percentage of total expenses, based on Table 16—Continued.

GROUP III.—CITIES HAVING A POPULATION OF 50,000 TO 100,000 IN 1910—Continued.

	Cities.	Board of education.		Finance offices.		Superintendent's office.		Other overhead expenses.		Total.	
		Percentage.	Rank.	Percentage.	Rank.	Percentage.	Rank.	Percentage.	Rank.	Percentage.	Rank.
41	Wilmington, Del.....					3.49	35	.05	1	3.54	22
42	Des Moines, Iowa.....	.87	8	.18	3	1.06	2	.66	13	2.77	12
43	Lawrence, Mass.....					1.65	13	.25	8	1.90	2
44	Tacoma, Wash.....			1.23	13	2.17	23	1.15	22	4.55	31
45	Kansas City, Kans.....	3.68	23			1.68	14	.90	16	6.26	37
46	St. Joseph, Mo.....	2.35	20	.23	5	1.46	9	.54	11	4.58	32
47	Troy, N. Y.....	.84	7	.04	1	1.50	10	.12	5	2.50	7
48	Utica, N. Y.....					1.79	20	1.93	24	3.72	23
49	Elizabeth, N. J.....	1.25	12			1.72	16			2.97	15
50	Schenectady, N. Y.....	.57	4			1.53	11	.25	8	2.35	5
51	Hoboken, N. J.....	3.03	22			1.29	6	.08	3	4.40	28
52	Manchester, N. H.....	.23	2			2.28	26			2.51	8
53	Evansville, Ind.....	.69	6	.34	6	1.76	17	.05	1	2.84	13
54	Norfolk, Va.....	.88	9	.16	2	1.12	5	.94	19	3.10	16
55	Wilkes-Barre, Pa.....			2.91	16	2.80	30	.12	5	5.83	36
56	Peoria, Ill.....	1.40	13	.22	4	1.10	4	2.93	25	5.65	35
57	Erie, Pa.....	2.77	21	4.22	18	1.93	21	.05	1	8.97	40
58	Savannah, Ga.....					3.62	36	.91	17	4.53	30
59	Oklahoma, Okla.....			1.05	11	1.65	13			2.70	10
60	Harrisburg, Pa.....	1.62	18	.80	10	1.12	5	1.01	21	4.45	29
61	Charleston, S. C.....					2.50	29			2.50	7
62	Portland, Me.....					1.37	8	.46	9	1.83	1
63	East St. Louis, Ill.....	1.86	19	1.40	14			.79	15	4.05	25
64	Holyoke, Mass.....					2.24	25	.51	10	2.75	11
65	Jacksonville, Fla.....	.38	3	2.42	15	4.00	37			6.80	38
66	Brockton, Mass.....					2.39	28			2.39	6
67	Bayonne, N. J.....	1.45	14			1.09	3	1.00	20	2.54	9
68	Johnstown, Pa.....			1.40	14	2.90	31			4.30	27
69	Passaic, N. J.....	1.51	15			1.69	15			3.20	18
70	Wichita, Kans.....	.99	11	.22	4	1.77	18	.92	18	3.90	24
71	Covington, Ky.....	1.57	16			1.78	19	1.63	23	4.98	34
72	Allentown, Pa.....			4.04	17	3.06	32	.20	6	7.30	39
73	Springfield, Ill.....					3.25	34	.06	2	3.31	20
74	Saginaw, Mich.....	.19	1	1.17	12	2.80	30	.67	14	4.83	33
75	Canton, Ohio.....	1.51	15	.46	8	2.20	24			4.17	26

GROUP IV.—CITIES HAVING A POPULATION OF 30,000 TO 50,000 IN 1910.

76	Sioux City, Iowa.....					3.25	23			3.25	11
77	Lancaster, Pa.....			1.11	6	2.51	14	0.14	4	3.76	14
78	Atlantic City, N. J.....			.64	4	1.81	4			2.45	5
79	Little Rock, Ark.....			5.25	12	3.18	22	.73	13	9.16	28
80	Rockford, Ill.....	0.65	8			1.70	3			2.35	3
81	Bay City, Mich.....	.29	6	.14	2	2.10	8	1.17	17	3.70	13
82	York, Pa.....			1.67	8	3.63	25	.82	15	6.12	26
83	Sacramento, Cal.....					1.95	6			1.95	1
84	Chattanooga, Tenn.....	1.55	15			2.95	18	.08	3	4.58	19
85	Malden, Mass.....					2.43	13			2.43	4
86	Pueblo, Colo.....	1.13	11	.98	5	3.07	20			5.18	22
87	Haverhill, Mass.....					1.67	2	1.27	18	2.94	7
88	New Britain, Conn.....	.02	2			3.16	21	.62	10	3.80	15
89	Topeka, Kans.....	.71	9	.14	2	1.70	3			2.55	6
90	Davenport, Iowa.....	.79	10	.04	1	1.22	1	.97	16	3.02	9
91	Wheeling, W. Va.....	1.15	12	1.90	9	2.15	9			5.20	23
92	Chester, Pa.....	.04	3	3.02	11	2.24	11	.70	12	6.00	25
93	Dubuque, Iowa.....	1.27	13	.36	3	2.31	12	.03	1	3.97	16
94	Woonsocket, R. I.....					3.00	19	.51	9	3.51	12
95	Racine, Wis.....	.64	7			1.92	5	.47	8	3.03	10
96	Knoxville, Tenn.....					4.41	27			4.41	18
97	New Castle, Pa.....	.06	4	2.11	10	2.19	10	.04	2	4.40	17
98	Joliet, Ill.....	2.22	17			3.84	26	.66	11	6.72	27
99	Auburn, N. Y.....	1.51	14			3.51	24	.33	7	5.35	24
100	Taunton, Mass.....					2.01	7	.04	2	2.05	2
101	Oshkosh, Wis.....	.01	1			2.75	17	.23	6	2.99	8
102	Joplin, Mo.....	.25	5	1.38	7	2.53	15	.74	14	4.90	20
103	Newport, Ky.....	2.11	16			2.69	16	.20	5	5.00	21

TABLE 24.—Showing for each item of expense of instruction, operation, and maintenance of elementary schools, including kindergartens, the percentage of total expenses; based on Table 17.

Cities.	Salaries of teachers.		Salaries and ex- penses of super- visors.		Text- books, station- ery, and general school supplies.		Janitors, engineers, and fire- men.		Fuel.		Water.		Light and power.		Janitors' supplies and sun- dry ex- penses.		Appa- ratus and manual training equip- ment.		School libraries.		Repairs and re- place- ments of equip- ment.		Repairs to build- ings.		Total.	
	Percent.	Rank.	Percent.	Rank.	Percent.	Rank.	Percent.	Rank.	Percent.	Rank.	Percent.	Rank.	Percent.	Rank.	Percent.	Rank.	Percent.	Rank.	Percent.	Rank.	Percent.	Rank.	Percent.	Rank.	Percent.	Rank.
Group I: Median.....	57.99	6	0.92	6	2.78	7	4.56	7	2.48	7	0.495	3+	0.33	5+	1.10	7	0.25	5	0.16	3	0.59	6	4.745	6+	77.51	7
Middle 50 per cents.....	{53.74 to {58.61	4 to 9	.785 to 1.985	4 to 8	1.04 to 3.57	4 to 10	4.16 to 6.02	4 to 10	1.17 to 2.69	4 to 10	{..... to {.....		{.16 to {.46	4 to 7	.62 to 2.21	4 to 9	.17 to .505	4 to 6	{..... to {.....		{.285 to {2.37	4 to 8	3.46 to 6.79	4 to 9	75.21 to 78.44	4 to 10
Group II: Median.....	55.45	10+	1.09	8	2.39	10+	5.12	10+	3.035	9+	.32	4	.18	7	.62	8+	.925	6+	.08	4	.59	7+	4.085	10+	76.985	10+
Middle 50 per cents.....	{52.13 to {62.00	6 to 15	.64 to 4.26	5 to 11	1.77 to 3.04	6 to 15	4.75 to 6.33	6 to 14	1.96 to 3.92	6 to 14	.29 to .50	3 to 5	.13 to .31	4 to 10	.49 to 1.01	5 to 13	.57 to 1.43	4 to 9	{..... to {.....		{.50 to {.86	5 to 10	2.57 to 6.20	6 to 15	71.86 to 79.00	6 to 15
Group III: Median.....	53.825	21+	1.73	15+	3.30	18+	5.39	20+	2.89	20	.38	7+	.295	16+	.925	20+	.43	11	.22	5	.68	17	4.30	20	76.90	21+
Middle 50 per cents.....	{50.63 to {58.25	12 to 30	1.24 to 3.49	8 to 23	2.04 to 4.01	9 to 28	4.785 to 6.37	12 to 30	2.09 to 3.71	11 to 30	.215 to .465	5 to 10	.155 to .475	9 to 21	.56 to 1.57	10 to 30	.26 to .60	6 to 14	.05 to .47	3 to 7	.37 to 1.28	9 to 25	3.07 to 5.77	11 to 29	73.775 to 78.81	12 to 30
Group IV: Median.....	54.19	14+	2.275	11+	1.99	13+	6.045	14+	3.39	14	.32	8	.20	11	.88	14	.785	6+	.16	5	.77	10	5.05	13	75.14	14+
Middle 50 per cents.....	{48.90 to {55.52	8 to 21	1.14 to 3.06	4 to 17	1.19 to 3.51	8 to 20	5.26 to 6.69	8 to 21	2.065 to 4.425	8 to 20	.20 to .46	4 to 9	.10 to .40	6 to 16	.515 to 1.57	8 to 20	.59 to 1.03	.08 to .33	2 to 6	.425 to 1.75	6 to 14	3.34 to 6.14	8 to 17	73.13 to 79.24	8 to 21	

GROUP I.—CITIES HAVING A POPULATION OF 300,000 AND OVER IN 1910.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
Chicago, Ill.....	57.99	7	0.23	2	1.44	5	7.00	12	2.69	10	.....	.....	0.16	4	0.41	3	0.28	5	0.16	3	0.07	1	7.15	10	77.55	8
St. Louis, Mo.....	53.74	4	1.43	8	2.78	7	4.08	3	1.17	4	0.19	2	.50	8	.99	6	.12	1	.05	1	.25	2	2.80	2	68.20	1
Cleveland, Ohio.....	46.79	1	4.57	10	.71	2	6.02	10	2.48	7	.....	.....	.50	8	3.72	10	.13	2	.....	.....	.30	4	4.29	5	69.51	2
Baltimore, Md.....	58.50	9	.17	1	3.57	10	3.54	1	3.04	12	.....	.....	.46	7	.01	1	.15	3	.....	.....	.56	5	6.44	8	78.44	10
Detroit, Mich.....	58.37	8	.79	3	2.59	6	6.48	11	2.26	6	.....	.....	.02	2	1.10	7	2.11	10	.....	.....	.....	1	2.29	1	76.01	5

6	Buffalo, N. Y.	51.37	3	7.13	11	3.17	9	4.89	8	2.68	9	.84	5	.62	9	2.38	10	.69	9	.27	5	2.02	8	4.79	7	80.85	12
7	San Francisco, Cal.	61.04	12	.....	.....	.44	1	7.80	13	.51	1	.72	4	.09	3	2.21	9	.19	4	.....	.....	1.05	7	3.46	4	77.51	7
8	Milwaukee, Wis.	58.61	10	.80	4	1.04	4	4.40	6	3.01	11	.87	6	.38	6	.24	2	.68	8	.17	4	.....	9	6.79	9	76.99	6
9	Newark, N. J.	57.75	6	1.29	7	3.05	8	4.56	7	1.75	5	.27	3	.28	5	.52	4	.37	6	.....	.....	3.23	10	4.70	6	77.77	9
10	New Orleans, La.	57.74	5	.88	5	4.55	12	4.16	4	.76	2	.....	.....	.01	1	5.66	12	.....	.....	.....	2.72	9	7.72	11	84.20	13	
11	Washington, D. C.	50.58	2	2.54	9	3.61	11	4.27	5	3.23	13	.....	.....	.28	5	.81	5	.53	7	.....	.....	.29	3	8.44	12	74.58	3
12	Los Angeles, Cal.	63.67	13	.....	.....	.99	3	3.95	2	.94	3	.01	1	.46	7	1.10	7	.19	4	.10	2	.59	6	3.21	3	75.21	4
13	Minneapolis, Minn.	60.29	11	.92	6	5.54	13	5.52	9	2.65	8	.....	.....	.....	.....	1.48	8	.....	.....	.....	3.27	11	.....	.....	.....	79.67	11

GROUP II.—CITIES HAVING A POPULATION OF 100,000 TO 300,000 IN 1910.

14	Jersey City, N. J.	66.38	20	1.01	6	3.04	15	4.79	7	3.03	9	.....	.....	0.19	8	0.53	7	1.62	11	0.02	2	0.57	6	4.60	12	85.78	20
15	Providence, R. I.	49.93	3	1.05	7	2.40	11	5.29	11	4.19	16	0.50	6	.13	4	.29	1	.....	.....	.....	.....	.62	9	7.40	16	71.80	5
16	St. Paul, Minn.	58.46	13	1.09	8	.27	1	10.88	19	2.95	8	.50	6	.....	.....	1.88	16	.....	.....	.....	.....	.....	.....	2.87	7	78.90	14
17	Portland, Oreg.	62.40	16	.....	.....	1.77	6	4.30	3	1.08	2	.36	5	.34	11	.60	8	1.56	10	.01	1	.....	.....	6.20	15	78.62	13
18	Columbus, Ohio.	43.20	1	9.63	15	2.38	10	6.29	13	2.53	7	.....	.....	.....	.....	.53	7	1.72	12	.....	.....	1.31	12	2.14	3	69.73	2
19	Toledo, Ohio.	62.00	15	.37	4	3.16	16	3.95	1	3.60	13	.....	.....	.09	3	3.40	18	1.10	8	.....	.....	1.01	11	1.48	2	80.16	16
20	Oakland, Cal.	62.86	18	.....	.....	1.94	9	4.34	4	.80	1	.29	3	.18	7	.64	9	.89	6	.52	7	1.59	13	4.95	13	79.00	15
21	Syracuse, N. Y.	53.17	9	.20	2	2.54	12	4.83	8	5.25	18	.....	.....	.49	13	1.37	14	.57	4	.....	.....	.....	.....	3.44	9	71.86	6
22	New Haven, Conn.	54.68	10	5.70	12	2.74	16	6.59	15	3.96	15	.....	.....	.31	10	1.59	15	.11	2	.35	6	.17	2	1.15	1	77.35	11
23	Birmingham, Ala.	52.70	8	7.77	14	.47	2	4.23	2	1.95	6	.32	4	.03	2	.82	11	.....	.....	.....	.....	.07	1	3.00	8	71.36	3
24	Memphis, Tenn.	64.25	19	2.82	11	3.27	17	6.99	17	1.90	5	.50	6	.16	6	.84	12	.....	.....	.....	.....	2.40	14	2.37	5	85.50	19
25	Scranton, Pa.	52.13	6	.....	.....	5.44	20	6.90	16	3.55	12	.92	7	.09	3	.36	2	.....	.....	.....	.....	.....	.....	2.25	4	71.64	4
26	Paterson, N. J.	61.46	14	.19	1	1.48	4	4.51	5	1.64	4	.21	1	.02	1	.39	3	.....	.....	.....	.....	.71	10	10.85	20	81.46	17
27	Omaha, Nebr.	56.22	11	.....	.....	2.55	13	6.33	14	3.47	11	.....	.....	.13	4	.78	10	.96	7	.....	.....	.27	3	5.93	14	76.64	10
28	Grand Rapids, Mich.	50.14	5	6.88	13	2.17	9	4.93	9	1.95	6	.21	1	.51	14	.36	2	.87	5	.....	.....	.45	4	7.68	17	76.15	9
29	Nashville, Tenn.	62.60	17	1.94	10	1.63	5	4.75	6	1.29	3	.24	2	.....	.....	1.01	13	.....	.....	.07	3	.58	7	10.26	19	84.37	18
30	Lowell, Mass.	50.01	4	.....	.....	2.15	8	8.86	18	3.92	14	.29	3	.43	12	.49	5	.....	.....	.....	.....	.....	.....	8.61	18	74.76	8
31	Cambridge, Mass.	49.59	2	.23	3	1.25	3	6.23	12	4.19	16	.....	.....	.19	8	.44	4	1.43	9	.....	.....	.55	5	4.13	11	68.23	1
32	Spokane, Wash.	52.54	7	.91	5	4.62	19	5.29	11	3.04	10	.....	.....	.14	5	2.76	17	.15	3	.08	4	.....	.....	2.57	6	72.10	7
33	Albany, N. Y.	57.71	12	1.30	9	3.85	18	4.95	10	4.63	17	.....	.....	.28	9	.50	6	.03	1	.12	5	.60	8	4.00	10	77.98	12

GROUP III.—CITIES HAVING A POPULATION OF 50,000 TO 100,000 IN 1910.

34	Hartford, Conn.	53.13	20	5.85	26	4.29	31	5.11	18	3.16	25	0.43	9	0.62	25	2.88	38	.....	.....	0.33	6	0.54	16	4.03	18	74.35	14
35	Trenton, N. J.	59.10	34	1.24	8	3.44	23	4.64	9	2.87	18	.....	.....	.18	11	2.10	36	.....	.....	.04	2	.42	11	2.04	4	76.07	19
36	New Bedford, Mass.	51.83	15	2.32	18	4.20	30	6.29	29	4.21	34	.....	.....	.15	8	1.12	24	0.43	11	.....	.....	.31	8	5.44	27	76.30	20
37	Reading, Pa.	56.70	27	.56	2	3.74	27	8.41	39	3.71	30	.....	.....	.03	3	.88	19	.29	8	.....	.....	1.06	22	2.52	6	77.90	29
38	Camden, N. J.	61.95	38	.11	1	5.12	33	7.04	35	2.93	22	.08	1	.10	7	.56	11	.68	16	.....	.....	1.92	27	3.61	13	84.10	39
39	Dallas, Tex.	51.67	14	11.62	31	.96	3	4.24	7	1.74	6	.....	.....	.....	.....	.24	3	.....	.....	.....	.....	1.93	28	.....	.....	72.40	9
40	Springfield, Mass.	45.61	4	3.76	25	3.43	22	5.37	19	4.79	37	.....	.....	.70	27	1.31	27	.88	17	.....	.....	.52	15	2.73	8	69.10	5

TABLE 24.—Showing for each item of expense of instruction, operation, and maintenance of elementary schools, including kindergartens, the percentage of total expenses; based on Table 17.—Continued.

GROUP III.—CITIES HAVING A POPULATION OF 50,000 TO 100,000 IN 1910—Continued.

EXPENSES OF CITY SCHOOL SYSTEMS.																										
Cities.	Salaries of teachers.		Salaries and expenses of supervisors.		Text-books, stationery, and general school supplies.		Janitors, engineers, and firemen.		Fuel.		Water.		Light and power.		Janitors' supplies and sundry expenses.		Apparatus and manual training equipment.		School libraries.		Repairs and replacements of equipment.		Repairs to buildings.		Total.	
	Percent.	Rank.	Percent.	Rank.	Percent.	Rank.	Percent.	Rank.	Percent.	Rank.	Percent.	Rank.	Percent.	Rank.	Percent.	Rank.	Percent.	Rank.	Percent.	Rank.	Percent.	Rank.	Percent.	Rank.	Percent.	Rank.
41	Wilmington, Del.	60.20	35	...	3.27	18	4.76	11	3.85	31	...	...	...	...	0.57	12	0.45	12	...	...	...	...	5.77	29	78.87	31
42	Des Moines, Iowa	52.18	16	1.39	2.81	15	6.00	27	2.81	17	8	0.41	10	0.17	9	.48	.56	14	...	...	...	...	4.73	22	74.54	15
43	Lawrence, Mass.	54.00	24	2.75	2.88	16	5.96	26	4.61	36	...	...	...	...	1.65	31	...	...	...	...	...	...	4.65	21	77.20	26
44	Tacoma, Wash.	50.36	11	6.40	3.18	17	4.91	13	2.21	14	8	.41	2	.02	26	1.21	.03	2	...	...	...	...	1.31	1	71.00	7
45	Kansas City, Kans.	53.90	23	...	1.56	7	5.09	17	2.89	20	10	.45	6	.06	13	.62	.26	6	...	...	...	...	3.67	14	68.70	4
46	St. Joseph, Mo.	57.36	29	1.52	1.25	4	9.66	40	3.37	26	...	...	...	.35	1	.05	.44	11	...	...	...	...	2.95	10	77.17	25
47	Troy, N. Y.	46.80	5	2.04	2.14	11	5.40	21	4.60	35	...	...	...	.30	21	.94	.02	1	...	...	...	...	9.71	35	74.31	13
48	Utica, N. Y.	58.30	31	...	1.85	8	6.50	32	5.25	38	...	...	...	.82	29	1.67	.05	3	...	...	...	...	2.53	7	77.13	23
49	Elizabeth, N. J.	53.90	23	1.27	5.89	35	5.38	20	2.48	15	6	.27	30	.84	10	.52	.05	3	...	...	...	...	1.75	3	75.60	17
50	Schenectady, N. Y.	58.65	32	2.95	2.04	9	3.76	4	3.96	32	...	...	...	.77	28	.45	.28	7	...	...	...	...	5.77	29	79.05	32
51	Hoboken, N. J.	60.35	36	...	3.56	25	4.08	6	1.62	4	7	.35	16	.29	23	1.00	...	...	...	...	...	...	8.23	33	79.85	36
52	Manchester, N. H.	58.90	33	...	2.62	13	3.97	5	6.56	40	13	.73	21	.43	18	.82	.38	9	...	...	...	...	4.30	20	79.50	34
53	Evansville, Ind.	50.90	12	8.59	1.51	6	6.43	31	2.21	14	...	...	...	.05	33	1.70	...	...	...	...	...	...	5.12	25	76.70	21
54	Norfolk, Va.	67.08	40	...	1.50	5	8.05	38	1.98	9	...	...	...	.33	16	.75	.43	10	...	...	...	...	3.77	16	85.00	40
55	Wilkes-Barre, Pa.	55.30	26	.99	6.40	37	5.69	25	3.45	28	5	.23	13	.24	15	.69	...	...	...	...	...	...	...	...	79.75	35
56	Peoria, Ill.	63.61	39	2.44	1.25	4	5.58	24	2.07	10	...	...	...	.26	2	.14	1.46	19	...	...	...	...	4.24	19	81.05	38
57	Erie, Pa.	45.10	2	7.23	3.72	26	6.31	30	3.49	29	...	...	...	.69	6	.42	.09	4	...	...	...	...	2.06	5	69.54	6
58	Savannah, Ga.	72.29	41	...	...	...	3.26	3	1.27	2	...	...	...	...	7	.43	...	...	...	...	...	...	1.50	2	78.75	20
59	Oklahoma, Okla.	53.80	21	2.65	3.33	19	4.69	10	1.68	5	...	...	...	...	...	...	...	...	...	...	...	...	4.87	23	74.10	12
60	Harrisburg, Pa.	48.19	7	1.10	6.65	38	6.92	34	2.88	19	2	.10	19	.35	5	.29	...	...	...	...	...	...	3.91	17	72.68	10
61	Charleston, S. C.	45.51	3	...	.26	2	1.28	1	...	...	...	...	...	...	40	8.38	...	...	...	...	...	...	3.07	11	58.50	1
62	Portland, Me.	52.70	19	1.67	3.46	24	7.25	36	4.09	33	1	.08	20	.41	20	.91	.50	13	...	...	...	...	5.49	28	77.20	26
63	East St. Louis, Ill.	47.10	6	11.35	2.35	12	10.40	41	1.78	8	14	.88	9	.16	17	.77	.64	15	...	...	...	...	3.60	12	80.23	37
64	Holyoke, Mass.	50.23	10	1.41	3.36	21	4.40	8	3.38	27	12	.55	22	.52	22	.99	...	...	...	...	...	...	7.87	32	73.45	11
65	Jacksonville, Fla.	52.20	17	...	...	...	2.80	2	.73	1	...	...	...	...	35	1.95	.15	5	...	...	...	...	5.05	24	64.90	2

TABLE 25.—Showing for each item of expense of instruction, operation, and maintenance of secondary schools the percentage of total expenses; based on Table 18.

EXPENSES OF CITY SCHOOL SYSTEMS.

Cities.	Salaries of teachers.		Salaries and expenses of supervisors.		Text-books, stationery, and general school supplies.		Janitors, engineers, and firemen.		Fuel.		Water.		Light and power.		Janitors' supplies and sundry expenses.		Apparatus and manual training equipment.		School libraries.		Repairs and replacements of equipment.		Repairs to buildings.		Total.	
	Percent	Rank.	Percent	Rank.	Percent	Rank.	Percent	Rank.	Percent	Rank.	Percent	Rank.	Percent	Rank.	Percent	Rank.	Percent	Rank.	Percent	Rank.	Percent	Rank.	Percent	Rank.	Percent	Rank.
Group I: Median.....	10.46	7	0.37	4+	0.37	6	0.83	7	0.29	7	0.07	2	0.10	5+	0.15	6	0.19	5	0.175	2+	0.07	5	0.585	6+	14.21	7
Middle, 50 per cents.....	{ 8.65 to 13.50	{ 4 to 10	{ .32 to .78	{ 3 to 6	{ .33 to .70	{ 4 to 9	{ .69 to 1.02	{ 4 to 10	{ .24 to .41	{ 4 to 9	{ }	{ }	{ .05 to .13	{ 3 to 7	{ .07 to .34	{ 3 to 9	{ .15 to .33	{ 3 to 7	{ }	{ }	{ .035 to .195	{ 3 to 7	{ .36 to .78	{ 4 to 9	{ 12.10 to 17.40	{ 4 to 10
Group II: Median.....	13.23	10	1.116	3+	.74	8+	1.03	9	.52	10	.07	3+	.17	6	.21	8+	.33	7+	.17	5	.095	5+	.535	9+	16.93	10+
Middle, 50 per cents.....	{ 10.51 to 14.585	{ 6 to 14	{ }	{ }	{ .125 to 1.00	{ 4 to 11	{ .74 to 1.40	{ 5 to 13	{ .395 to .68	{ 6 to 13	{ .05 to .085	{ 3 to 4	{ .05 to .23	{ 3 to 8	{ .11 to .33	{ 5 to 13	{ .13 to 1.015	{ 5 to 9	{ .08 to .25	{ 3 to 7	{ .035 to .175	{ 3 to 8	{ .36 to .665	{ 6 to 13	{ 13.66 to 18.60	{ 6 to 15
Group III: Median.....	11.37	21+	.89	10+	.925	18+	.86	19	.40	14	.08	6	.09	7	.20	13	.495	10+	.15	5	.165	9+	.64	15+	15.51	21+
Middle, 50 per cents.....	{ 9.95 to 13.88	{ 12 to 31	{ .33 to 1.24	{ 6 to 15	{ .47 to 1.50	{ 10 to 26	{ .59 to 1.22	{ 9 to 27	{ .21 to .64	{ 6 to 21	{ .045 to .13	{ 4 to 7	{ .06 to .15	{ 5 to 10	{ .085 to .41	{ 5 to 19	{ .35 to .89	{ 6 to 15	{ .08 to .25	{ 3 to 7	{ .06 to .305	{ 5 to 14	{ .33 to .905	{ 8 to 22	{ 13.045 to 18.97	{ 13 to 31
Group IV: Median.....	12.125	12+	1.005	6+	.51	12	1.11	13	.63	13	.05	4	.13	7	.20	11	.22	6	.10	4	.12	5	.575	9+	16.565	14+
Middle, 50 per cents.....	{ 10.40 to 14.15	{ 8 to 19	{ .31 to 1.56	{ 4 to 9	{ .28 to .99	{ 7 to 17	{ .83 to 1.37	{ 7 to 19	{ .34 to .835	{ 7 to 18	{ .04 to .08	{ 3 to 6	{ .04 to .31	{ 3 to 13	{ .155 to .43	{ 7 to 15	{ .115 to .58	{ 4 to 8	{ .03 to .27	{ 2 to 6	{ .06 to .30	{ 3 to 8	{ .39 to 1.115	{ 6 to 14	{ 14.23 to 19.03	{ 8 to 21

GROUP I.—CITIES HAVING A POPULATION OF 300,000 OR OVER IN 1910.

1	Chicago, Ill.....	8.65	4	0.25	2	0.51	7	0.73	5	0.29	7	.....	0.07	4	0.07	3	0.15	3	.....	.....	0.01	1	0.80	10	11.30	3
2	St. Louis, Mo.....	10.96	8	.....	.....	.96	10	1.39	12	.36	8	0.01	.08	5	.27	8	.15	3	.....	.....	.03	2	.34	3	14.55	8
3	Cleveland, Ohio.....	11.90	9	1.13	7	.19	2	1.05	11	.36	8	.....	.13	7	.11	4	.19	5	.....	.....	.08	6	.44	5	15.58	9
4	Baltimore, Md.....	10.40	6	.23	1	1.40	12	.94	9	.26	5	.....	.05	3	.01	1	.18	4	.....	.....	.04	3	.70	8	14.21	7
5	Detroit, Mich.....	13.50	10	.....	.....	.67	8	1.60	13	.53	10	.....	.01	1	.73	12	.....	.....	.....	.....	.36	4	.36	4	17.40	10

6	Buffalo, N. Y.....	8.25	3	.78	6	.70	9	.77	6	.27	6	.07	2	.20	9	.37	10	.29	7	0.09	1	.01	1	.63	7	12.43	5
7	San Francisco, Cal.....	10.46	7	.....	.....	.04	1	.54	3	.07	2	.09	3	.02	2	.23	7	.04	1	.....	.....	.07	5	.54	6	12.10	4
8	Milwaukee, Wis.....	9.64	5	.40	5	.36	5	.86	8	.61	12	.07	2	.14	8	.15	6	.38	8	.16	2	.....	.....	.78	9	13.55	6
9	Newark, N. J.....	6.29	2	.....	.....	.37	6	.38	2	.08	3	.01	1	.12	6	.06	2	.11	2	.....	.....	.23	9	.33	2	7.98	2
10	New Orleans, La.....	5.86	1	.34	4	.36	5	.29	1	.05	1	.....	.....	.01	1	.64	11	.....	.....	.....	.04	3	.25	1	7.83	1	
11	Washington, D. C.....	14.11	12	1.18	8	.33	4	.69	4	.41	9	.....	.....	.14	8	.13	5	.52	10	.23	4	.20	8	.86	11	18.80	12
12	Los Angeles, Cal.....	16.39	13	.....	.....	.21	3	.83	7	.24	4	.....	.....	.12	6	.34	9	.46	9	.19	3	.19	7	.93	12	19.90	13
13	Minneapolis, Minn.....	14.01	11	.32	3	1.32	11	1.02	10	.55	11	.....	.....	.....	.....	.07	3	.20	6	.....	.....	.91	10	.....	.....	18.40	11

GROUP II.—CITIES HAVING A POPULATION OF 100,000 TO 300,000 IN 1910.

4	Jersey City, N. J.....	6.72	1	.....	.....	0.25	6	0.86	6	0.43	7	.....	.....	0.02	1	0.07	4	0.19	6	.....	.....	.....	.....	0.15	3	8.69	2
15	Providence, R. I.....	13.23	10	0.15	1	1.58	14	1.23	12	.85	16	0.06	3	.08	4	.11	5	.....	.....	.....	.....	.....	.....	1.05	17	18.60	15
16	St. Paul, Minn.....	14.10	12	.....	.....	.....	.....	1.92	17	.52	10	.09	5	.....	.....	.42	15	.....	.....	1.06	9	.....	.....	.57	10	18.68	16
17	Portland, Oreg.....	9.69	5	.....	.....	.45	7	.56	2	.29	4	.04	2	.04	2	.14	6	.38	8	.....	.....	.....	.....	.77	16	12.36	5
18	Columbus, Ohio.....	18.70	19	1.69	6	.10	4	1.40	13	.89	17	.....	.....	.....	.....	.11	5	.....	.....	1.89	10	.....	.....	.35	5	25.00	20
19	Toledo, Ohio.....	12.33	8	.24	2	.76	9	.56	2	.52	10	.....	.....	.18	7	.36	14	1.08	10	.....	.....	.03	2	.....	.....	16.06	7
20	Oakland, Cal.....	14.13	13	.....	.....	.05	1	.75	5	.16	2	.08	4	.06	3	.29	11	.27	7	.07	2	.39	12	.47	8	16.72	9
21	Syracuse, N. Y.....	14.73	15	.....	.....	.09	3	1.63	14	.50	9	.....	.....	.23	8	.58	17	.02	1	.....	.....	.....	.....	.43	7	18.21	13
22	New Haven, Conn.....	11.33	6	1.03	3	.85	10	1.40	13	.64	12	.....	.....	.16	5	.24	10	.16	5	.05	1	.03	2	.18	4	16.07	8
23	Birmingham, Ala.....	14.44	14	1.30	4	.10	4	1.89	16	.82	15	.15	6	.50	11	.22	9	1.43	11	.17	5	.04	3	.37	6	21.43	17
24	Memphis, Tenn.....	6.78	2	.....	.....	.07	2	.57	3	.10	1	.04	2	.....	.....	.20	8	.....	.....	.08	3	.06	4	.....	.....	7.90	1
25	Scranton, Pa.....	15.53	16	.....	.....	.76	9	1.00	8	.18	3	.09	5	.02	1	.18	7	.....	.....	.....	.....	.....	.....	.68	14	18.44	14
26	Paterson, N. J.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.02	1	10.70	12	.63	8	.38	11	.07	2	11.80	4
27	Omaha, Nebr.....	13.33	11	.....	.....	1.06	12	.95	7	.49	8	.....	.....	.02	1	.51	16	.19	6	.....	.....	.15	7	.50	9	17.20	12
28	Grand Rapids, Mich.....	12.42	9	1.50	5	.72	8	1.03	9	.39	5	.08	4	.17	6	.06	3	.03	2	.11	4	.02	1	.60	11	17.13	11
29	Nashville, Tenn.....	8.71	3	.....	.....	.15	4	.39	1	.40	6	.02	1	.....	.....	.07	4	.....	.....	.....	.....	.03	2	.05	1	9.82	3
30	Lowell, Mass.....	9.46	4	.....	.....	1.00	11	1.17	11	.67	13	.06	3	.45	10	.04	2	.07	3	.....	.....	.09	5	.65	13	13.66	6
31	Cambridge, Mass.....	16.15	18	.....	.....	1.00	11	1.85	15	1.32	18	.....	.....	.17	6	.31	12	.95	9	.....	.....	.37	10	1.70	18	23.82	19
32	Spokane, Wash.....	15.66	17	.....	.....	1.72	15	1.07	10	.69	14	.....	.....	.23	8	.78	18	1.08	10	.20	6	.....	.....	.61	12	22.04	18
33	Albany, N. Y.....	12.07	7	.....	.....	1.40	13	.73	4	.56	11	.....	.....	.42	9	.33	13	.10	4	.25	7	.10	6	.70	15	16.73	10

GROUP III.—CITIES HAVING A POPULATION OF 50,000 TO 100,000 IN 1910.

34	Hartford, Conn.....	11.40	22	0.75	8	1.12	23	0.90	20	0.86	26	0.15	8	0.09	7	0.73	24	.....	.....	.....	.....	0.10	7	0.36	10	16.46	23
35	Trenton, N. J.....	9.34	9	.....	.....	.80	17	.59	9	.24	7	.....	.....	.08	6	.16	10	2.00	20	.....	.....	.09	6	.28	5	13.58	13
36	New Bedford, Mass.....	7.63	4	.06	2	.69	14	.67	12	.37	12	.....	.....	.04	3	.13	9	.....	.....	.....	.....	.03	3	.16	2	9.78	2
37	Reading, Pa.....	11.34	21	.....	.....	1.91	30	1.37	29	.40	14	.....	.....	.10	8	.38	18	.....	.....	.....	.....	.17	10	.17	3	15.84	22
38	Camden, N. J.....	5.79	1	.11	3	.47	10	1.09	24	.15	3	.....	.....	.08	6	.13	9	.75	14	.....	.....	.20	11	2.13	32	10.90	5
39	Dallas, Tex.....	16.77	40	1.25	16	.32	8	1.78	33	.58	19	.....	.....	.....	.....	.12	8	.72	13	.70	9	.06	5	.....	.....	22.30	36
40	Springfield, Mass.....	14.52	34	1.64	19	1.55	27	2.04	36	.97	28	.....	.....	.45	15	.88	26	.37	8	.....	.....	.06	5	.67	17	23.15	39

TABLE 25.—Showing for each item of expense of instruction, operation, and maintenance of secondary schools the percentage of total expenses; based on Table 18—Continued.

EXPENSES OF CITY SCHOOL SYSTEMS.

GROUP III.—CITIES HAVING A POPULATION OF 50,000 TO 100,000 IN 1910—Continued.

Cities.	Salaries of teachers.		Salaries and expenses of supervisors.		Text-books, stationery, and general school supplies.		Janitors, engineers, and firemen.		Fuel.		Water.		Light and power.		Janitors' supplies and sundry expenses.		Apparatus and manual-training equipment.		School libraries.		Repairs and replacements of equipment.		Repairs to buildings.		Total.	
	Percent.	Rank.	Percent.	Rank.	Percent.	Rank.	Percent.	Rank.	Percent.	Rank.	Percent.	Rank.	Percent.	Rank.	Percent.	Rank.	Percent.	Rank.	Percent.	Rank.	Percent.	Rank.	Percent.	Rank.	Percent.	Rank.
41 Wilmington, Del.	12.78	28	...	...	1.25	24	.95	21	.40	14	...	...	...	...	.26	14	...	...	...	...	...	...	.93	23	16.57	24
42 Des Moines, Iowa.	12.34	27	1.45	18	.39	9	1.46	30	.89	27	.08	6	.11	9	.04	2	.65	12	...	...	...	...	1.87	30	19.28	33
43 Lawrence, Mass.	10.10	13	...	...	.85	18	.45	4	.53	18	...	...	.36	12	.03	1	...	...	...	...	...	...	.11	1	12.43	9
44 Tacoma, Wash.	16.02	38	1.12	13	1.00	19	1.12	25	.64	21	.06	4	.04	3	.51	22	.93	17	.17	6	.08	20	.22	4	22.50	37
45 Kansas City, Kans.	17.40	41	...	...	.78	16	1.96	35	.73	25	.18	9	.48	16	.48	21	1.04	18	.08	3	.24	13	.61	14	24.00	40
46 St. Joseph, Mo.	13.98	32	.12	4	.22	5	1.22	27	.36	11	...	...	.41	14	...	...	.29	5	.03	1	...	...	.33	8	16.96	26
47 Troy, N. Y.	10.60	15	.33	6	.08	2	1.08	23	.50	17	...	...	.17	11	.20	13	.14	2	...	...	.45	17	1.29	28	14.84	18
48 Utica, N. Y.	10.95	18	...	...	.50	11	1.49	31	.19	5	...	...	.08	6	.17	11	...	...	...	...	.01	1	1.07	24	14.46	16
49 Elizabeth, N. J.	9.48	10	...	...	1.00	19	.84	17	.31	9	.05	4	...	...	.09	5	...	...	...	...	.32	15	.61	14	12.70	10
50 Schenectady, N. Y.	12.00	26	...	...	...	...	.59	9	.50	17	...	...	.38	13	.11	7	.45	10	.15	5	...	...	.67	17	14.85	19
51 Hoboken, N. J.	7.50	3	...	...	1.07	21	.66	11	.21	6	...	...	.02	2	.08	4	.39	9	...	...	.05	4	.72	19	10.70	4
52 Manchester, N. H.	10.51	14	...	...	1.50	26	.86	19	.71	24	.11	7	.15	10	.19	12	...	...	...	...	.29	14	.48	11	14.80	17
53 Evansville, Ind.	15.70	36	.77	9	...	...	1.17	26	.24	7	...	...	.01	1	.31	16	.21	4	...	...	.02	2	.51	12	18.94	31
54 Norfolk, Va.	9.04	8	...	...	.23	6	.56	7	.13	1	...	...	.02	2	.07	3	...	...	...	...	...	...	...	...	10.05	3
55 Wilkes-Barre, Pa.	10.66	16	.03	1	.52	12	...	...	.14	2	.01	1	.06	5	.20	13	.36	7	...	...	.54	18	.65	16	13.17	12
56 Peoria, Ill.	8.44	5	.92	11	.12	3	.58	8	.39	13	...	...	.04	3	.03	1	.16	3	...	...	...	...	.32	7	11.00	6
57 Erie, Pa.	10.00	12	2.39	20	2.09	33	1.17	26	.67	23	...	...	.17	11	.79	25	...	...	...	...	.09	6	.16	2	17.53	28
58 Savannah, Ga.	11.75	25	1.20	14	...	...	.65	10	.14	2	...	...	.06	5	.04	2	.54	11	...	...	...	...	...	...	14.38	15
59 Oklahoma, Okla.	16.03	39	...	...	1.33	25	.53	6	.19	5	...	...	...	...	...	...	...	...	...	...	.37	16	.55	13	19.00	32
60 Harrisburg, Pa.	14.09	33	...	...	1.57	28	1.28	28	.67	23	.01	1	.15	10	.03	1	.89	15	...	...	.16	9	.88	22	19.73	35
61 Charleston, S. C.	11.02	19	...	...	...	...	.25	1	...	...	...	...	...	...	2.01	29	...	...	...	...	...	...	.72	19	14.00	14
62 Portland, Me.	12.90	29	...	...	1.58	29	1.03	22	.62	20	...	...	.06	5	.10	6	...	...	...	...	...	...	1.19	26	17.48	27
63 East St. Louis, Ill.	8.51	6	.86	10	.16	4	.79	15	.33	10	.18	9	.09	7	.07	3	...	...	.04	2	...	...	.22	4	11.40	7
64 Holyoke, Mass.	11.63	24	.32	5	1.05	20	1.74	32	1.46	29	.08	6	.64	17	.40	19	...	...	...	...	.23	12	.77	20	18.33	30
65 Jacksonville, Fla.	15.50	35	...	...	...	...	.44	3	.24	7	...	...	...	...	.64	23	...	...	...	...	.68	20	2.10	31	19.60	34

66	Brockton, Mass.	16.00	37	2.41	34	1.86	34	.65	22	.11	7	.06	5	.92	27	.35	6	.11	463	15	23.10	38
67	Bayonne, N. J.	6.37	2	.....	.....	.66	13	.43	2	.17	4	.....	.....	.....	.....	.42	20	.....	.....	.....	.....	.....	.85	9	8.40	1
68	Johnstown, Pa.	11.28	20	1.24	15	2.90	36	.80	16	.14	2	.04	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	1.20	27	17.90	29
69	Passaic, N. J.	10.90	17	.....	.....	2.03	32	.50	5	.21	6	.03	2	.09	7	.03	1	1.24	19	.....	.....	.....	.....	.....	15.03	20
70	Wichita, Kans.	11.50	23	1.39	17	.26	7	.85	18	.47	16	.....	.....	.....	.....	.38	18	.....	.....	.....	.....	.....	.83	8	15.18	21
71	Covington, Ky.	8.60	7	.....	.....	.....	.....	.71	13	.19	5	.07	5	.11	9	.34	17	.....	.....	.....	.....	.06	5	1.69	11.77	8
72	Allentown, Pa.	9.90	11	.....	.....	1.09	22	.44	3	.62	20	.....	.....	.....	.....	.31	16	.....	.....	.25	7	.....	.81	6	12.92	11
73	Springfield, Ill.	13.05	30	.....	.....	.04	1	.75	14	.30	8	.....	.....	.05	4	.93	28	.08	1	.....	.....	.57	19	1.12	16.94	25
74	Saginaw, Mich.	19.60	42	.37	7	.72	15	2.46	37	.97	28	.18	9	.09	7	.29	15	.92	16	.27	8	.17	10	.83	21	26.87	41
75	Canton, Ohio.	13.78	31	.97	12	2.63	35	1.03	22	.41	1501	1	.03	103	3	.71	18	19.60	24

GROUP IV.—CITIES HAVING A POPULATION OF 30,000 TO 50,000 IN 1910.

76	Sioux City, Iowa.....	10.31	7	.....	.....	0.83	16	1.46	20	0.64	14	0.08	5	0.07	6	0.24	12	.....	.....	.....	.....	.....	.....	0.55	9	14.18	7
77	Lancaster, Pa.....	12.15	13	.....	.....	1.09	19	1.37	19	1.09	20	.05	4	.....	.....	.36	15	.....	.....	.....	.....	.....	.....	2.19	19	19.03	21
78	Atlantic City, N. J.....	12.27	14	.....	.....	.66	14	1.11	13	.83	18	.28	7	.....	.....	1.00	22	.....	.....	.....	.....	.....	.....	.....	.....	16.15	12
79	Little Rock, Ark.....	11.99	11	.....	.....	.34	8	1.13	14	.61	12	.08	5	.06	5	.15	6	.....	.....	.....	.....	.....	.....	.47	8	14.95	11
80	Rockford, Ill.....	15.60	23	.....	.....	.15	5	3.03	25	1.58	24	.....	.....	.55	18	.56	18	0.42	8	.....	.....	.....	.....	2.01	18	23.96	28
81	Bay City, Mich.....	15.50	22	1.90	10	.68	15	1.02	11	.57	10	.05	4	.03	2	.18	9	.....	.....	.....	.....	.....	.....	1.10	14	21.05	24
82	York, Pa.....	10.40	8	.31	4	1.52	22	1.11	13	.59	11	.11	6	.39	16	.....	.....	.....	.....	.....	.....	.....	.....	.15	1	14.65	10
83	Sacramento, Cal.....	11.60	9	1.36	7	1.11	20	1.25	17	.10	1	.....	.....	.06	5	.50	16	.11	3	.....	.....	.....	.....	.39	6	16.68	15
84	Chattanooga, Tenn.....	12.48	15	.....	.....	.37	11	.52	3	.29	5	.04	3	.01	1	.19	10	.....	.....	.....	.....	.....	.....	.....	.....	13.90	6
85	Malden, Mass.....	16.94	25	.46	5	2.31	24	1.62	21	1.96	25	.....	.....	.37	14	.15	6	.....	.....	.....	.....	.....	.....	.....	.....	23.81	27
86	Pueblo, Colo.....	14.78	20	.....	.....	.53	13	1.69	22	.38	7	.....	.....	.03	2	.12	5	.....	.....	.02	1	.25	7	.70	11	18.50	19
87	Haverhill, Mass.....	12.55	16	.30	3	1.39	21	.48	2	.63	13	.....	.....	.38	15	.02	1	.22	6	.....	.....	.....	.....	.46	7	16.43	13
88	New Britain, Conn.....	8.96	3	2.28	11	.36	10	1.17	15	.79	16	.....	.....	.16	8	.26	13	.....	.....	.18	6	.....	.....	.39	6	14.54	9
89	Topeka, Kans.....	16.81	24	.....	.....	.11	3	1.32	18	1.37	22	.05	4	.44	17	.06	2	.....	.....	.02	1	.....	.....	1.36	17	21.54	25
90	Davenport, Iowa.....	12.10	12	3.23	12	.11	3	2.74	24	.82	17	.....	.....	.16	9	.20	11	.74	9	.08	3	.34	9	.....	.....	20.52	22
91	Wheeling, W. Va.....	7.30	1	.65	6	.31	7	.32	1	.19	3	.....	.....	.03	2	.66	19	.....	.....	.....	.....	.12	5	.22	2	9.80	1
92	Chester, Pa.....	9.30	5	.....	.....	.....	.....	1.23	16	.....	.....	.....	.....	.....	.....	.97	21	.....	.....	.....	.....	.....	.....	.....	.....	11.50	3
93	Dubuque, Iowa.....	12.80	17	1.56	9	.05	2	.97	10	.54	9	.73	8	.31	13	.26	13	.12	4	.36	7	.12	5	.27	4	18.09	17
94	Woonsocket, R. I.....	8.65	2	.05	1	.35	9	.57	5	.30	6	.03	2	.03	2	.10	4	.....	.....	.10	4	.02	1	.30	5	10.50	2
95	Racine, Wis.....	11.80	10	1.54	8	.66	14	.96	9	.70	15	.....	.....	.26	12	.20	11	1.17	10	.41	9	.30	8	.60	10	18.60	20
96	Knoxville, Tenn.....	13.41	18	.....	.....	.25	6	.83	7	.29	5	.04	3	.04	3	.17	8	.....	.....	.....	.....	.80	12	1.30	16	17.13	16
97	New Castle, Pa.....	10.40	8	.....	.....	2.02	23	.56	4	.16	2	.01	1	.13	7	.54	17	.....	.....	.....	.....	.02	1	.39	6	14.23	8
98	Joliet, Ill.....	18.22	26	.....	.....	.31	7	1.90	23	.83	18	.....	.....	.25	11	.08	3	.07	2	.15	5	.03	2	.26	3	22.10	26
99	Auburn, N. Y.....	15.05	21	.....	.....	.12	4	.67	6	.84	19	.08	5	.17	10	.16	7	.15	5	.02	1	.....	.....	1.13	15	18.39	18
100	Taunton, Mass.....	9.06	4	.18	2	.51	12	.93	8	1.38	23	.04	3	.01	1	.69	20	.05	1	.....	.....	.....	.....	.71	12	13.56	5
101	Oshkosh, Wis.....	14.15	19	.....	.....	.98	17	1.46	20	1.17	21	.....	.....	.39	16	.19	10	.38	7	.38	8	.69	10	.95	13	20.74	23
102	Joplin, Mo.....	9.85	6	.....	.....	1.00	18	.67	6	.48	8	.....	.....	.04	3	.17	8	1.25	11	.04	2	.....	.....	.....	.....	13.50	4
103	Newport, Ky.....	11.80	10	.....	.....	.02	1	1.04	12	.25	4	.....	.....	.05	4	.29	14	.....	.....	.....	.....	.....	.....	3.00	20	16.45	14

TABLE 26.—Showing for total amounts expended for instruction, operation, and maintenance of normal, evening, vacation, and special schools the percentage of total expenses; based on Table 19.

Cities.	Normal schools.		Evening schools.		Vacation schools.		Special schools.		Total.	
	Percent- age.	Rank.	Percent- age.	Rank.	Percent- age.	Rank.	Percent- age.	Rank.	Percent- age.	Rank.
Group I: Median.....	1.87	4	1.45	7	0.235	3+	0.665	3+	3.54	7
Middle, 50 per cents.....			{ 1.10 to 1.68	{ 4 to 10	{ .18 to .50	{ 3 to 5			{ 2.67 to 4.86	{ 4 to 10
Group II: Median.....			1.52	9	.27	3+	1.32	1+	1.71	9+
Middle, 50 per cents.....			{ .86 to 2.20	{ 5 to 13					{ .77 to 2.71	{ 5 to 14
Group III: Median.....	1.15	4	.975	15+	.67	2	2.05	1+	1.31	17
Middle, 50 per cents.....			{ .615 to 1.995	{ 9 to 23					{ .665 to 2.315	{ 10 to 25
Group IV: Median.....			1.185	7+			.775	2+	1.685	7+
Middle, 50 per cents.....			{ .57 to 2.13	{ 5 to 10					{ .79 to 2.335	{ 5 to 10

GROUP I.—CITIES HAVING A POPULATION OF 300,000 OR MORE IN 1910.

1	Chicago, Ill.....	1.21	3	1.68	10	0.16	2	0.49	2	3.54	7
2	St. Louis, Mo.....	2.05	5	1.10	4	.18	3	1.60	5	4.93	11
3	Cleveland, Ohio.....	2.52	7	1.12	5	.50	5	.42	1	4.56	9
4	Baltimore, Md.....			1.16	6					1.16	8
5	Detroit, Mich.....			1.51	8	.65	6	.55	3	2.71	5
6	Buffalo, N. Y.....	.24	1	2.14	11	.29	4			2.67	4
7	San Francisco, Cal.....			4.21	12			.78	4	4.99	12
8	Milwaukee, Wis.....			1.45	7	.18	3	3.23	6	4.86	10
9	Newark, N. J.....	.80	2	6.42	13	1.49	7			8.71	13
10	New Orleans, La.....	2.25	6	1.65	9					3.90	8
11	Washington, D. C.....	1.87	4	1.04	3					2.91	6
12	Los Angeles, Cal.....			.64	2					.64	2
13	Minneapolis, Minn.....			.16	1	.08	1			.24	1

GROUP II.—CITIES HAVING A POPULATION OF 100,000 TO 300,000 IN 1910.

14	Jersey City, N. J.....			1.70	11	0.13	2			1.83	11
15	Providence, R. I.....			4.10	16					4.10	17
16	St. Paul, Minn.....					.26	3			.26	1
17	Portland, Oreg.....			.66	3			1.86	2	2.52	13
18	Columbus, Ohio.....	.42	1	.10	1					.52	8
19	Toledo, Ohio.....										
20	Oakland, Cal.....			1.74	12					1.74	10
21	Syracuse, N. Y.....			1.03	7	.06	1			1.09	7
22	New Haven, Conn.....			1.31	8	.37	6			1.68	9
23	Birmingham, Ala.....										
24	Memphis, Tenn.....			.68	4					.68	4
25	Scranton, Pa.....			2.20	13					2.20	12
26	Paterson, N. J.....			1.52	9					1.52	8
27	Omaha, Nebr.....			1.01	6					1.01	6
28	Grand Rapids, Mich.....			1.60	10	.28	4	.78	1	2.66	14
29	Nashville, Tenn.....			.86	5					.86	5
30	Lowell, Mass.....			5.54	17					5.54	18
31	Cambridge, Mass.....			3.13	15	.34	5			3.47	16
32	Spokane, Wash.....			.28	2					.28	2
33	Albany, N. Y.....			2.76	14					2.76	15

GROUP III.—CITIES HAVING A POPULATION OF 50,000 TO 100,000 IN 1910.

34	Hartford, Conn.....			3.70	30	0.79	3			4.49	30
35	Trenton, N. J.....			1.54	20			3.34	2	4.88	32
36	New Bedford, Mass.....	4.12	7	2.05	24					6.17	34
37	Reading, Pa.....			1.81	22					1.81	21
38	Camden, N. J.....			.65	11					.65	8

TABLE 27.—Showing for each object of expense of instruction, operation, and maintenance of all schools the percentage of total expenses; based on Table 20.

EXPENSES OF CITY SCHOOL SYSTEMS.

Cities.	Salaries of teachers.		Salaries and expenses of supervisors.		Text-books, stationery, and general school supplies.		Janitors, engineers, and firemen.		Fuel.		Water.		Light and power.		Janitors' supplies and sundry expenses.		Apparatus and manual training equipment.		School libraries.		Repairs and replacements of equipment.		Repairs to buildings.		Total.	
	Percent.	Rank.	Percent.	Rank.	Percent.	Rank.	Percent.	Rank.	Percent.	Rank.	Percent.	Rank.	Percent.	Rank.	Percent.	Rank.	Percent.	Rank.	Percent.	Rank.	Percent.	Rank.	Percent.	Rank.	Percent.	Rank.
Group I: Median.....	69.55	7	1.45	6	3.76	7	6.55	7	2.86	7	0.55	3+	0.615	6+	1.44	7	0.445	6+	0.27	3+	0.79	6	5.245	6+	95.40	7
Middle 50 per cent.....	{66.80 to 73.90	4 to 10	1.015 to 2.885	4 to 8	1.45 to 4.11	4 to 10	5.25 to 7.52	4 to 10	1.58 to 3.21	4 to 10	{.34 to .65	4 to 8	{.34 to .65	4 to 8	.86 to 2.48	4 to 10	.33 to .99	4 to 9	{.47 to 2.44	4 to 8	4.12 to 7.57	4 to 9	93.81 to 95.93	4 to 9		
Group II: Median.....	69.97	10+	1.20	8	3.12	10+	6.435	10+	3.685	10+	.41	6	.37	9	.88	9+	1.196	6+	.15	6	.70	8	4.735	10+	94.905	10+
Middle 50 per cent.....	{67.31 to 72.82	6 to 15	.76 to 4.765	5 to 11	2.37 to 3.68	6 to 14	5.72 to 7.71	6 to 15	2.37 to 4.60	6 to 15	.325 to .555	4 to 8	.27 to .62	5 to 12	.60 to 1.29	5 to 14	.745 to 1.79	5 to 9	.07 to .41	3 to 9	.465 to .98	5 to 11	3.19 to 6.97	6 to 15	94.08 to 95.94	6 to 15
Group III: Median.....	67.61	21+	2.55	17	4.59	19+	6.66	20+	3.56	19	.40	7+	.42	15	1.19	20+	.525	13+	.23	7+	.81	16	4.985	19+	94.44	21+
Middle 50 per cent.....	{64.18 to 70.33	12 to 31	1.27 to 3.49	9 to 25	2.31 to 5.64	11 to 29	5.82 to 7.63	12 to 29	2.46 to 4.25	11 to 29	.275 to .63	5 to 11	.245 to .905	10 to 22	.83 to 2.08	11 to 30	.35 to 1.21	8 to 20	.08 to .56	4 to 10	.43 to 1.71	9 to 24	3.77 to 6.71	11 to 29	92.80 to 95.50	12 to 31
Group IV: Median.....	65.795	14+	2.455	11+	2.80	14+	7.145	14+	4.22	14	.43	8	.44	13	1.05	14	1.03	7+	.215	6+	.905	9+	5.54	13+	93.855	13+
Middle 50 per cent.....	{63.80 to 68.70	8 to 21	1.57 to 4.27	6 to 17	1.58 to 4.90	8 to 21	6.53 to 7.77	8 to 21	2.57 to 5.46	8 to 20	.28 to .58	5 to 10	.21 to .68	7 to 18	.685 to 1.96	8 to 20	.585 to 1.24	5 to 10	.13 to .50	4 to 9	.51 to 1.79	5 to 14	3.205 to 6.69	7 to 19	92.70 to 94.93	7 to 20

GROUP I.—CITIES HAVING A POPULATION OF 300,000 OR OVER IN 1910.

1	Chicago, Ill.....	69.29	6	0.29	1	2.17	5	8.02	11	3.07	9	.....	0.34	4	0.49	3	0.40	6	0.18	2	0.08	1	7.97	10	92.39	3
2	St. Louis, Mo.....	67.72	5	1.50	7	3.94	9	6.77	9	1.58	4	0.21	.60	6	1.31	6	.29	3	.06	1	.42	3	3.28	2	87.68	1
3	Cleveland, Ohio.....	62.40	2	5.90	10	1.02	2	7.52	10	2.86	7	.....	.63	7	3.90	12	.33	4	.....	.....	.29	2	4.80	5	89.65	2
4	Baltimore, Md.....	69.55	7	.40	2	5.08	11	6.64	8	3.29	11	.....	.65	8	.03	1	.34	5	.....	.....	.62	5	7.19	8	93.81	4
5	Detroit, Mich.....	73.90	10	.79	3	3.29	6	8.29	12	2.80	6	.....	.08	1	2.24	9	2.17	12	.....	.....	.....	.....	2.66	1	96.15	10

6	Buffalo, N. Y.	61.85	1	7.98	11	3.90	8	5.80	6	2.94	8	.90	5	.81	9	2.75	11	.99	9	.36	6	2.06	8	5.41	7	95.75	8
7	San Francisco, Cal.	76.06	12	.....	.....	.51	1	8.45	13	.61	1	.81	4	.31	3	2.48	10	.23	2	.....	.....	1.15	7	3.99	3	94.60	6
8	Milwaukee, Wis.	71.32	9	1.65	8	1.45	4	5.45	5	3.65	13	.95	6	.86	11	.39	2	1.88	11	.33	5	.....	.....	7.57	9	95.40	7
9	Newark, N. J.	70.97	8	1.45	6	3.75	7	5.25	4	1.88	5	.29	3	.85	10	.86	4	.49	7	.....	.....	3.59	10	5.08	6	94.46	5
10	New Orleans, La.	66.30	3	1.38	5	5.30	12	4.50	1	.82	2	.....	.....	.12	2	6.47	13	.....	.....	.....	2.82	9	8.22	11	95.93	9	
11	Washington, D. C.	66.80	4	4.12	9	4.11	10	5.07	3	3.64	12	.....	.....	.42	5	.96	5	1.06	10	.25	3	.53	4	9.31	12	96.29	11
12	Los Angeles, Cal.	80.48	13	.....	.....	1.20	3	4.83	2	1.31	3	.01	1	.63	7	1.44	7	.65	8	.29	4	.79	6	4.12	4	95.75	8
13	Minneapolis, Minn.	74.50	11	1.24	4	6.87	13	6.55	7	3.21	10	.....	.....	.....	.....	1.56	8	.20	1	.....	.....	4.18	11	.....	.....	98.31	12

GROUP II.—CITIES HAVING A POPULATION OF 100,000 TO 300,000 IN 1910.

14	Jersey City, N. J.	74.57	19	1.01	6	3.29	11	5.72	6	3.63	10	.....	.....	0.28	6	0.60	5	1.85	10	0.02	2	0.57	6	4.76	11	96.30	17
15	Providence, R. I.	66.26	4	1.20	8	4.21	16	6.83	12	5.29	18	0.57	9	.34	8	.46	2	.....	.....	.08	4	.80	10	8.46	17	94.50	8
16	St. Paul, Minn.	72.82	15	1.09	7	.27	1	12.80	20	3.47	9	.59	10	.....	.....	2.30	17	.....	.....	1.06	11	.....	.....	3.44	8	97.84	20
17	Portland, Oreg.	73.82	17	.....	.....	2.62	8	5.02	2	1.46	3	.41	6	.47	10	.79	8	1.93	11	.01	1	.....	.....	6.97	15	93.50	4
18	Columbus, Ohio	61.93	1	11.73	15	2.49	7	7.71	15	3.42	8	.....	.....	.....	.....	.66	6	1.73	9	1.59	12	1.49	13	2.50	4	95.25	13
19	Toledo, Ohio	74.33	18	.61	4	3.92	15	4.51	.1	4.12	14	.....	.....	.27	5	3.76	19	2.18	12	.....	.....	1.04	12	1.48	2	96.22	16
20	Oakland, Cal.	78.56	20	.....	.....	2.03	4	5.09	4	.96	1	.38	5	.33	7	.92	10	1.16	6	.59	10	2.02	14	5.42	12	97.46	19
21	Syracuse, N. Y.	68.75	9	.21	2	2.63	9	6.51	11	5.76	20	.....	.....	.71	15	2.13	16	.59	4	.....	.....	.....	.....	3.87	9	91.16	1
22	New Haven, Conn.	67.31	6	6.73	12	3.68	14	8.25	17	4.60	15	.....	.....	.47	10	1.84	15	.27	3	.41	9	.21	3	.33	1	95.10	12
23	Birmingham, Ala.	67.13	5	9.06	14	.57	2	6.12	8	2.78	7	.47	7	.54	11	1.07	12	1.43	8	.15	6	.11	2	3.36	7	92.79	3
24	Memphis, Tenn.	71.52	12	2.80	11	3.44	12	7.63	14	2.04	5	.54	8	.17	2	1.03	11	.....	.....	.07	3	2.47	15	2.37	.3	94.06	6
25	Scranton, Pa.	69.43	10	.....	.....	6.30	18	8.08	16	3.75	12	1.02	11	.21	4	.55	3	.....	.....	.....	.....	.....	.....	2.94	.5	92.28	2
26	Paterson, N. J.	73.40	16	.20	1	2.12	5	5.08	3	1.64	4	.21	1	.08	1	.42	1	.....	.....	.....	.....	.78	9	10.85	20	94.78	9
27	Omaha, Nebr.	70.41	11	.....	.....	3.64	13	7.37	13	3.96	13	.....	.....	.18	3	1.29	14	1.16	6	.....	.....	.43	4	6.41	14	94.85	10
28	Grand Rapids, Mich.	64.32	3	8.93	13	2.95	10	6.16	9	2.37	6	.30	3	.69	13	.42	1	.90	5	.11	5	.50	5	8.29	16	95.94	15
29	Nashville, Tenn.	72.10	13	1.98	10	1.78	3	5.25	5	1.33	2	.25	2	.....	.....	1.06	13	.....	.....	.07	3	.61	7	10.56	19	94.96	11
30	Lowell, Mass.	63.62	2	.....	.....	3.29	11	10.70	19	4.80	16	.35	4	1.06	16	.56	4	.07	1	.....	.....	.09	1	9.42	18	93.96	5
31	Cambridge, Mass.	68.34	7	.24	3	2.37	6	8.36	18	5.64	19	.....	.....	.62	12	.76	7	2.44	13	.....	.....	.92	11	5.83	13	95.52	14
32	Spokane, Wash.	68.44	8	.91	5	6.34	19	6.36	10	3.74	11	.....	.....	.37	9	3.55	18	1.23	7	.29	7	.....	.....	3.19	6	94.42	7
33	Albany, N. Y.	72.34	14	1.30	9	5.26	17	5.85	7	5.20	17	.....	.....	.70	14	.84	9	.13	2	.37	8	.70	8	4.71	10	97.40	18

GROUP III.—CITIES HAVING A POPULATION OF 50,000 TO 100,000 IN 1910.

34	Hartford, Conn.	62.15	7	6.72	28	5.40	27	6.21	17	4.06	26	0.58	10	1.06	27	3.68	39	.....	.....	0.32	9	0.72	15	4.40	16	95.30	30
35	Trenton, N. J.	71.92	36	1.30	10	4.65	21	5.52	9	3.20	17	.....	.....	.40	14	2.52	34	2.00	26	.04	2	.66	14	2.32	4	94.53	22
36	New Bedford, Mass.	63.73	10	2.70	20	5.16	26	7.41	26	4.92	33	.....	.....	.30	11	1.30	23	.50	13	.....	.....	.35	7	5.83	25	92.25	8
37	Reading, Pa.	69.56	30	.56	2	5.64	29	10.04	38	4.12	27	.....	.....	.14	6	1.27	21	.29	7	.....	.....	1.24	21	2.69	6	95.55	33
38	Camden, N. J.	68.17	24	.24	1	5.63	28	8.26	34	3.08	15	.08	1	.18	7	.69	9	1.44	24	.....	.....	2.13	27	5.75	24	95.65	35
39	Dallas, Tex.	69.24	27	12.88	33	1.28	4	6.02	14	2.32	10	.....	.....	.....	.....	.36	5	.71	16	.70	11	1.99	25	.....	.....	95.50	31
40	Springfield, Mass.	62.84	9	5.76	27	5.14	25	7.41	26	5.76	37	.....	.....	1.15	29	2.35	32	1.25	22	.....	.....	.58	12	3.39	8	95.63	34

TABLE 27.—Showing for each object of expense of instruction, operation, and maintenance of all schools the percentage of total expenses; based on Table 20—Continued.

EXPENSES OF CITY SCHOOL SYSTEMS.

GROUP III.—CITIES HAVING A POPULATION OF 50,000 TO 100,000 IN 1910—Continued.

Cities.	Salaries of teachers.		Salaries and expenses of supervisors.		Text-books, stationery, and general school supplies.		Janitors, engineers, and firemen.		Fuel.		Water.		Light and power.		Janitors' supplies and sundry expenses.		Apparatus and manual training equipment.		School libraries.		Repairs and replacements of equipment.		Repairs to buildings.		Total.	
	Percent.	Rank.	Percent.	Rank.	Percent.	Rank.	Percent.	Rank.	Percent.	Rank.	Percent.	Rank.	Percent.	Rank.	Percent.	Rank.	Percent.	Rank.	Percent.	Rank.	Percent.	Rank.	Percent.	Rank.	Percent.	Rank.
41 Wilmington, Del.....	73.62	39	2.84	21	4.51	18	5.71	11	4.25	29	.49	9	.28	10	.85	13	.45	11	.....	.....	.....	.....	6.71	29	96.10	37
42 Des Moines, Iowa.....	65.38	13	2.87	22	6.20	33	7.47	27	3.71	23	.....	.....	.97	26	.53	7	1.21	20	.....	.....	.....	.....	6.80	27	94.71	25
43 Lawrence, Mass.....	68.20	25	2.87	22	3.88	15	6.73	22	5.13	35	.....	.....	.20	8	1.67	27	.....	.....	.....	.....	.....	.....	4.76	18	94.30	20
44 Tacoma, Wash.....	66.30	16	7.47	29	4.14	16	6.98	23	2.79	13	.45	8	.20	8	1.69	28	1.18	19	.16	6	1.63	23	1.51	1	93.50	14
45 Kansas City, Kans.....	71.30	34	.....	.....	2.34	12	7.06	24	3.61	21	.64	12	.54	20	1.09	19	1.32	23	.08	4	.44	10	4.28	14	92.70	11
46 St. Joseph, Mo.....	71.34	35	1.64	11	1.47	6	10.88	39	3.73	24	.....	.....	.76	22	.05	1	.73	17	.25	8	.....	.....	3.28	7	94.13	19
47 Troy, N. Y.....	58.30	4	2.40	16	2.22	10	6.54	19	5.11	34	.....	.....	.48	18	1.00	15	.16	4	.81	12	2.04	26	11.04	38	90.10	4
48 Utica, N. Y.....	70.46	32	.....	.....	2.31	11	7.95	31	5.44	36	.....	.....	.89	25	2.08	30	.05	1	.04	2	.12	2	3.56	10	92.90	12
49 Elizabeth, N. J.....	67.52	21	1.27	9	7.40	37	6.54	19	3.05	14	.33	6	1.07	28	.81	10	.....	.....	.05	3	3.58	31	2.36	5	93.98	18
50 Schenectady, N. Y.....	72.13	37	2.95	23	2.03	9	4.52	4	4.45	30	.....	.....	1.15	29	.55	8	.73	17	.56	10	.....	.....	6.43	26	95.50	31
51 Hoboken, N. J.....	69.40	29	.....	.....	4.62	20	4.82	5	1.97	5	.35	7	.54	20	1.11	20	.48	12	.....	.....	.42	8	8.95	34	92.66	10
52 Manchester, N. H.....	70.50	33	.....	.....	4.19	17	4.90	6	7.27	39	.84	13	.58	21	1.02	17	.38	10	.....	.....	1.09	18	4.76	18	95.53	32
53 Evansville, Ind.....	66.88	18	9.36	30	1.52	7	7.72	30	2.46	11	.....	.....	.07	3	2.04	29	.21	5	.....	.....	.22	4	5.64	23	96.12	38
54 Norfolk, Va.....	76.53	40	.....	.....	1.73	8	8.69	37	2.17	8	.....	.....	.37	13	.83	11	.45	11	.....	.....	1.11	19	3.77	11	95.65	35
55 Wilkes-Barre, Pa.....	66.45	17	1.02	5	6.94	35	6.33	18	3.62	22	.25	4	.30	11	.90	14	.36	9	.....	.....	7.43	32	.....	.....	93.60	15
56 Peoria, Ill.....	72.33	38	3.36	24	1.37	5	6.20	16	2.46	11	.....	.....	.30	11	.17	2	1.61	25	.....	.....	.....	.....	4.55	17	92.35	9
57 Erie, Pa.....	56.35	2	9.62	31	5.83	30	7.50	28	4.16	28	.....	.....	.86	24	1.35	23	.09	2	.....	.....	.50	11	2.24	3	98.50	3
58 Savannah, Ga.....	85.10	41	1.20	8	.....	.....	3.96	3	1.45	2	.....	.....	.09	4	.48	6	.53	14	.....	.....	.....	.....	1.52	2	94.35	21
59 Oklahoma, Okla.....	70.50	33	2.65	19	4.76	22	5.25	7	1.87	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3.45	30	5.42	22	93.90	17
60 Harrisburg, Pa.....	62.82	8	1.10	6	8.29	38	8.24	33	3.56	19	.12	2	.50	19	.32	4	.89	18	.....	.....	2.41	28	4.80	19	93.06	13
61 Charleston, S. C.....	56.53	3	.....	.....	.26	2	1.53	1	.....	.....	.....	.....	.....	.....	10.39	40	.....	.....	.....	.....	.....	.....	3.79	12	72.50	1
62 Portland, Me.....	66.12	15	1.67	12	5.04	23	8.28	35	4.71	31	.08	1	.47	17	1.01	16	.50	13	.21	7	.43	9	6.68	28	95.20	29
63 East St. Louis, Ill.....	55.90	1	12.24	32	2.50	13	11.30	40	2.10	6	1.06	15	.28	10	.84	12	.64	15	.56	10	.81	16	3.82	13	92.05	7
64 Holyoke, Mass.....	64.35	12	1.73	13	4.56	19	6.62	20	4.84	32	.63	11	1.18	30	1.39	24	.....	.....	.....	.....	.97	17	8.63	33	94.90	27
65 Jacksonville, Fla.....	67.70	22	.....	.....	.....	.....	3.24	2	.97	1	.....	.....	.....	.....	2.59	35	.15	3	.....	.....	2.70	29	7.15	30	84.50	2

66	Brockton, Mass.....	66.98	19	1.18	7	7.30	36	7.17	25	6.11	38	.30	5	.33	12	2.40	33	.35	8	.11	5	.....	.....	4.31	15	96.54	39
67	Bayonne, N. J.....	69.30	28	.82	3	5.95	31	5.47	8	2.26	9	.....	.....	.....	.....	3.13	37	.26	6	.....	.....	.....	.....	7.32	31	95.73	36
68	Johnstown, Pa.....	60.78	5	2.55	17	6.24	34	7.54	29	2.32	10	.92	14	.06	2	.....	.....	.....	.....	.....	.....	.....	.....	14.30	39	94.70	24
69	Passaic, N. J.....	70.20	31	.....	.....	6.10	32	5.54	10	3.35	18	.23	3	.85	23	1.44	25	1.24	21	.03	1	.....	.....	5.33	21	94.60	23
70	Wichita, Kans.....	65.45	14	2.63	18	2.31	11	5.93	12	2.58	12	.....	.....	.....	.....	3.59	38	.35	8	.....	.....	.....	.....	10.82	37	94.94	28
71	Covington, Ky.....	66.99	20	3.73	26	.12	1	6.14	15	1.49	3	.30	5	.46	16	1.48	26	.....	.....	.....	.....	.30	6	10.35	36	91.36	6
72	Allentown, Pa.....	61.65	6	.95	4	5.10	24	6.70	21	3.58	20	.....	.....	.21	9	2.10	31	.....	.....	.25	8	.50	11	10.31	35	91.35	5
73	Springfield, Ill.....	68.65	26	3.49	25	.31	3	6.00	13	2.15	7	.....	.....	.11	5	2.68	36	2.54	28	.....	.....	1.71	24	8.01	32	95.65	35
74	Saginaw Mich.....	64.01	11	2.16	14	3.56	14	8.22	32	3.87	25	.63	11	.42	15	1.03	18	2.23	27	1.85	13	.64	13	5.13	20	93.75	16
75	Canton, Ohio.....	67.81	23	2.37	15	9.02	39	8.44	36	3.14	16	.....	.....	.02	1	.28	3	.....	.....	.....	.....	.20	3	3.52	9	94.80	26

GROUP IV.—CITIES HAVING A POPULATION OF 30,000 TO 50,000 IN 1910.

76	Sioux City, Iowa.....	68.41	20	0.84	1	1.42	7	8.50	24	5.49	21	0.50	9	0.14	4	1.88	20	.....	.....	.....	.....	.....	.....	6.65	19	93.83	13
77	Lancaster, Pa.....	61.33	5	.....	.....	4.90	21	8.76	25	4.48	15	.43	8	.....	.....	3.03	24	.....	.....	.....	.....	.....	.....	7.24	22	93.88	14
78	Atlantic City, N. J.....	60.41	3	.....	.....	6.49	25	5.43	5	5.81	23	1.90	14	.....	.....	9.93	26	.....	.....	.....	.....	.....	.....	5.98	16	95.95	22
79	Little Rock, Ark.....	68.39	19	2.56	13	2.32	13	5.19	4	3.17	10	.85	13	.44	13	.93	11	.....	.....	.....	.....	1.79	14	2.79	4	88.43	2
80	Rockford, Ill.....	64.68	11	2.99	14	.54	1	9.74	27	5.84	24	.....	.....	.75	19	2.93	23	1.52	13	.....	.....	.06	1	8.24	24	97.29	27
81	Bay City, Mich.....	64.50	10	8.53	21	3.60	19	7.13	14	3.20	11	.43	8	.19	6	.96	13	.....	.....	.....	.....	.23	2	6.16	17	94.93	20
82	York, Pa.....	63.80	8	1.57	6	7.02	26	7.92	22	4.22	14	.63	11	.64	16	.....	.....	.....	.....	.....	.....	.65	7	5.20	12	91.65	3
83	Sacramento, Cal.....	74.45	27	2.51	12	3.57	18	6.85	10	.83	1	.....	.....	.67	17	1.75	19	.69	6	.50	9	1.11	12	3.22	7	96.15	24
84	Chattanooga, Tenn.....	77.58	28	.....	.....	1.75	10	4.42	2	2.28	6	.36	7	.09	3	1.70	18	.....	.....	.....	.....	.....	.....	6.17	18	94.35	17
85	Malden, Mass.....	69.80	22	1.48	5	5.82	24	6.96	12	7.05	25	.....	.....	.79	21	.39	2	.....	.....	.....	.....	.30	3	4.07	8	96.66	25
86	Pueblo, Colo.....	68.70	21	4.27	17	3.02	16	8.18	23	2.51	7	.23	3	.36	11	.72	8	.....	.....	.02	1	1.50	13	3.19	6	92.70	7
87	Haverhill, Mass.....	68.31	18	1.33	4	4.96	22	6.45	7	4.82	18	.....	.....	.54	15	.34	1	.50	4	.....	.....	.51	5	5.58	14	93.34	8
88	New Britain, Conn.....	66.89	2	3.66	16	7.47	27	6.44	6	5.65	22	.....	.....	1.43	24	.54	5	.....	.....	.51	10	.....	.....	2.11	1	84.70	1
89	Topeka, Kans.....	73.30	26	.86	2	1.60	9	7.50	18	4.00	13	.10	2	.80	22	.49	4	.88	7	.13	4	.82	9	5.50	13	95.98	23
90	Davenport, Iowa.....	52.00	1	13.14	23	.55	2	6.97	13	2.63	8	.....	.....	.18	5	.58	6	1.46	12	.16	6	3.78	17	10.60	26	92.05	5
91	Wheeling, W. Va.....	62.40	6	10.30	23	1.10	4	4.31	1	2.87	9	.....	.....	.69	18	2.04	21	.67	5	.....	.....	1.03	11	8.00	23	93.40	9
92	Chester, Pa.....	64.70	12	.....	.....	4.19	20	9.04	26	.....	.....	.....	.....	.....	.....	15.57	27	.....	.....	.....	.....	.....	.....	.....	.....	93.50	10
93	Dubuque, Iowa.....	66.10	16	5.91	20	.61	3	7.23	16	4.54	17	.79	12	.38	12	.47	3	1.22	9	.42	8	.40	4	6.73	20	94.80	19
94	Woonsocket, R. I.....	62.96	7	2.40	11	5.00	23	7.25	17	7.26	26	.53	10	.25	8	1.05	14	.09	2	.27	7	.99	10	5.95	15	94.00	15
95	Racine, Wis.....	72.44	24	4.60	18	1.58	8	6.94	11	3.36	12	.....	.....	.77	20	.86	10	2.75	14	.61	11	.77	8	2.12	2	96.80	26
96	Knorrville, Tenn.....	72.75	25	.84	1	1.12	5	6.56	9	1.51	2	.31	5	.08	2	.94	12	.....	.....	.....	.....	4.34	18	5.08	11	93.53	11
97	New Castle, Pa.....	64.75	13	2.28	10	7.02	26	7.57	19	2.10	4	.02	1	.67	17	2.55	22	.....	.....	.....	.....	.06	1	6.78	21	93.80	12
98	Joliet, Ill.....	65.90	15	2.07	8	2.60	14	9.84	28	4.50	16	.....	.....	.52	14	1.10	15	.07	1	.14	5	.59	6	4.57	9	91.90	4
99	Auburn, N. Y.....	70.49	23	2.27	9	1.87	11	6.53	8	5.43	20	.33	6	.35	10	.65	7	1.18	8	.10	3	.....	.....	2.45	3	91.65	3
100	Taunton, Mass.....	65.69	14	1.84	7	3.20	17	7.16	15	8.23	27	.25	4	.21	7	3.55	25	.13	3	.....	.....	.....	.....	4.75	10	96.00	21
101	Oshkosh, Wis.....	64.34	9	5.84	19	2.18	12	7.77	21	4.90	19	.....	.....	1.15	23	.75	9	1.23	10	1.10	12	2.57	15	2.81	5	94.64	18
102	Joplin, Mo.....	60.75	4	1.04	3	3.00	15	5.17	3	2.22	5	.....	.....	.04	1	1.29	16	1.25	11	.04	2	19.40	19	.....	.....	94.20	16
103	Newport, Ky.....	66.58	17	3.05	15	1.25	6	7.76	20	1.81	3	.....	.....	.30	9	1.40	17	.....	.....	.....	.....	.....	.....	10.10	.....	92.25	6

TABLE 28.—Showing for each item of miscellaneous expenses the percentage of total expenses; based on Table 21.

Cities.	School census and elections.		Truant officers and police.		Medical inspectors and nurses.		Pensions.		Rent.		Insurance.		Transportation of pupils.		Payments to schools and institutions.		Other miscellaneous expenses.		Total.	
	Per-cent- age.	Rank.	Per-cent- age.	Rank.	Per-cent- age.	Rank.	Per-cent- age.	Rank.	Per-cent- age.	Rank.	Per-cent- age.	Rank.	Per-cent- age.	Rank.	Per-cent- age.	Rank.	Per-cent- age.	Rank.	Per-cent- age.	Rank.
Group I: Median.....	0.16	3	0.435	3+	0.30	5	0.75	3+	0.30	6+	0.095	4+	0.095	1+	1.06	4+	0.20	4	2.82	7
Middle 50 per cents.			{ .16 to .49 }	2 to 5	.25 to .37	3 to 6			{ .15 to .44 }	4 to 9	.07 to .27	3 to 6			{ .73 to 1.40 }	3 to 6			{ 1.58 to 3.10 }	4 to 10
Group II: Median.....	.24	6	.24	6	.235	3+	.475	3+	.275	6+	.36	7+	.06	2	.68	4+	.25	4	2.24	10
Middle 50 per cents.	{ .16 to .34 }	4 to 8	.21 to .39	4 to 9	.19 to .32	3 to 5			{ .09 to .50 }	4 to 9	.10 to 1.00	4 to 11			{ .53 to 1.61 }	3 to 6			{ 1.15 to 3.10 }	6 to 14
Group III: Median.....	.195	10+	.36	14	.36	6	.81	6	.34	14+	.49	16	.22	5	.415	8+	.16	3+	2.075	18+
Middle 50 per cents.	{ .15 to .38 }	7 to 14	.285 to .655	9 to 22	.27 to .475	4 to 9	.48 to 1.035	4 to 8	.14 to .58	8 to 20	.27 to .89	8 to 25	.14 to .41	3 to 7	.27 to .58	5 to 12			{ 1.205 to 3.01 }	10 to 26
Group IV: Median.....	.195	9+	.48	13	.30	4+			.395	6+	.57	8	.50	1+	.26	4	.75	3	2.62	21+
Middle 50 per cents.	{ .14 to .34 }	6 to 14	.30 to .58	7 to 19	.20 to .38	3 to 6			{ .29 to .57 }	4 to 9	.31 to 1.26	5 to 13							{ 1.37 to 2.49 }	8 to 21

GROUP I.—CITIES HAVING A POPULATION OF 300,000 OR OVER IN 1910.

1	Chicago, Ill.....	0.06	1	0.49	5	0.26	4	0.71	2	0.55	10		0.09	1	1.30	5	0.35	7	3.81	11
2	St. Louis, Mo.....	.16	3	.52	6	.09	1			.15	4	0.08	.10	2	2.63	8	.28	5	4.05	13
3	Cleveland, Ohio.....	.15	2	.40	3					.07	1	.04			1.40	6			2.32	7
4	Baltimore, Md.....		5	.49	5	.30	5			2.58	12	.07			.49	1	.10	2	4.02	12
5	Detroit, Mich.....	.27	4	.47	4	.40	7	.73	3	.16	5	.02							2.05	5

EXPENSES OF CITY SCHOOL SYSTEMS.

TABLE 28.—Showing for each item of miscellaneous expenses the percentage of total expenses; based on Table 21—Continued.

GROUP III.—CITIES HAVING A POPULATION OF 50,000 TO 100,000 IN 1910—Continued.

Cities.	School census and elections.		Truant officers and police.		Medical inspectors and nurses.		Pensions.		Rent.		Insurance.		Transportation of pupils.		Payments to schools and institutions.		Other miscellaneous expenses.		Total.	
	Per-cent- age.	Rank.	Per-cent- age.	Rank.	Per-cent- age.	Rank.	Per-cent- age.	Rank.	Per-cent- age.	Rank.	Per-cent- age.	Rank.	Per-cent- age.	Rank.	Per-cent- age.	Rank.	Per-cent- age.	Rank.	Per-cent- age.	Rank.
41 Wilmington, Del.	.11	5	.30	10	.16	2	.10	6	.15	3	.18	4	.49	11	.89	6	.36	1		
42 Des Moines, Iowa	.14	6	1.18	31	.84	12	.47	19	.36	12	.18	4	.75	13	.24	5	2.52	22		
43 Lawrence, Mass.	.24	12	.20	3					.08	2							3.80	32		
44 Tacoma, Wash.	.38	14	.36	14					.89	25							1.95	16		
45 Kansas City, Kans.	.20	11							.48	15							1.04	5		
46 St. Joseph, Mo.	.48	17	.34	12	.16	2	.14	8	.17	4							1.29	11		
47 Troy, N. Y.	.02	2	.45	17			.81	6	.18	5							7.40	35		
48 Utica, N. Y.			.66	23			1.06	24	1.66	32							3.38	28		
49 Elizabeth, N. J.			.19	2	.45	9	.54	4	.96	27	.02	1	.58	12			3.05	27		
50 Schenectady, N. Y.			.65	22	.37	7	1.13	9									2.15	19		
51 Hoboken, N. J.			.61	21			.78	5	.41	18	.41	7			.14	3	2.94	25		
52 Manchester, N. H.	.62	18	.74	26			.08	5	.52	17							1.96	17		
53 Evansville, Ind.	.19	10	.36	14			.11	7	.20	6					.18	4	1.04	5		
54 Norfolk, Va.							1.23	26	.02	1							1.25	10		
55 Wilkes-Barre, Pa.			.17	1					.40	13							.57	2		
56 Peoria, Ill.	.19	10	.27	7			.03	1	.39	16							2.00	18		
57 Erie, Pa.	.18	9	.52	19					1.76	33					.07	2	2.53	23		
58 Savannah, Ga.	.65	19					.16	9	.31	10							1.12	8		
59 Oklahoma, Okla.	.01	1	.71	25			.25	11	2.43	34							3.40	29		
60 Harrisburg, Pa.			.22	4	.33	5	1.51	11	.20	6			.24	4			2.50	21		
61 Charleston, S. C.							1.45	10	1.15	29			22.40	16			25.00	37		
62 Portland, Me.	.42	16	.34	12			.05	3	1.50	31	.68	8					2.97	26		
63 East St. Louis, Ill.	.69	20	1.11	29			1.17	25	.93	26							3.90	33		
64 Holyoke, Mass.	.07	3	1.13	30	.36	6	.35	15			.29	6	.15	3			2.35	20		
65 Jacksonville, Fla.							.06	4	.63	20	7.60	9	.41	8			8.70	36		
66 Brockton, Mass.	.15	7	.28	8	.50	10					.04	2	.02	1			1.07	7		
67 Bayonne, N. J.			.35	13	.22	3	.91	22	.25	7							1.73	15		
68 Johnstown, Pa.			.24	5			.04	2	.72	22							1.00	3		
69 Passaic, N. J.			.38	15	.38	8	.29	13	.43	14			.27	5			2.15	19		
70 Wichita, Kans.	.70		.32	11			.27	12	.27	8			.30	6			1.16	9		

71	Covington, Ky.....	.41	15	1.09	28	.....	.....	.....	1.88	27	.28	9	.....	.....	.....	3.66	31
72	Allentown, Pa.....	.....	.....	.55	20	.....	.....	.....	.....	.....	.80	23	.....	.....	.....	1.35	12
73	Springfield, Ill.....	.....	.....	.42	16	.....	.....	.....	.35	15	.27	8	.....	.....	.....	1.04	5
74	Saginaw, Mich.....	.17	8	.....	.....	.....	.....	.....	.....	.....	.83	24	.....	.42	.....	1.42	13
75	Canton, Ohio.....	.24	12	.30	10	.....	.....	.....	.....	.....	.49	16	.....	.....	.....	1.03	4

GROUP IV.—CITIES HAVING A POPULATION OF 30,000 TO 50,000 IN 1910.

76	Sioux City, Iowa.....	.....	.....	0.30	7	.....	.....	.....	0.21	3	1.69	16	.....	.....	.....	2.92	23
77	Lancaster, Pa.....	.....	.....	.80	22	.....	.....	.....	.....	.....	.08	3	.....	.....	.....	2.36	18
78	Atlantic City, N. J.....	.....	.....	.98	23	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1.60	12
79	Little Rock, Ark.....	0.25	11	.....	.....	.....	.....	.....	.....	.....	2.16	17	.....	.....	.....	2.41	20
80	Rockford, Ill.....	.11	3	.25	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.36	2
81	Bay City, Mich.....	.34	14	.76	21	.....	.....	.....	.....	.....	.28	4	.....	.....	.....	1.37	8
82	York, Pa.....	.....	.....	.28	6	.....	.....	.....	.....	.....	1.20	12	.....	.....	.....	2.23	17
83	Sacramento, Cal.....	.27	12	.48	13	.....	.....	.....	.58	10	.57	8	.....	.....	.....	1.90	14
84	Chattanooga, Tenn.....	.....	.....	.16	1	.....	.....	.....	.34	5	.31	5	.....	.....	.....	1.07	6
85	Malden, Mass.....	.13	5	.44	12	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.91	5
86	Pueblo, Colo.....	.42	15	.71	20	.....	.....	.....	.....	.....	.95	9	.....	.....	.....	2.12	16
87	Haverhill, Mass.....	.07	1	.43	11	.....	.....	.....	.71	12	1.03	10	.....	.....	.....	3.72	26
88	New Britain, Conn.....	.21	10	.49	14	.....	.....	.....	.....	.....	1.26	13	.....	.....	.....	11.50	28
89	Topeka, Kans.....	.12	4	.17	2	.....	.....	.....	.....	.....	1.18	11	.....	.....	.....	1.47	11
90	Davenport, Iowa.....	.10	2	.26	4	.....	.....	.....	.....	.....	.57	8	.....	.....	.....	4.93	27
91	Wheeling, W. Va.....	.18	9	.56	18	.....	.....	.....	.65	11	.01	1	.....	.....	.....	1.40	10
92	Chester, Pa.....	.....	.....	.50	15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.50	3
93	Dubuque, Iowa.....	.34	14	.31	8	.....	.....	.....	.51	8	.07	2	.....	.....	.....	1.23	7
94	Woonsocket, R. I.....	.34	14	1.60	25	.....	.....	.....	.11	2	.28	4	.....	.....	.....	2.49	21
95	Racine, Ws.....	.17	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.17	1
96	Knoxville, Tenn.....	.....	.....	.....	.....	.....	.....	.....	.35	6	1.27	14	.....	.....	.....	2.06	15
97	New Castle, Pa.....	.....	.....	.27	5	.....	.....	.....	.09	1	1.44	15	.....	.....	.....	1.80	13
98	Joliet, Ill.....	.16	7	.32	9	.....	.....	.....	.44	7	.46	6	.....	.....	.....	1.38	9
99	Auburn, N. Y.....	.34	14	.40	10	.....	.....	.....	.57	9	.46	6	.....	.....	.....	3.00	25
100	Taunton, Mass.....	.17	8	.53	16	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2.95	24
101	Oshkosh, Wis.....	.14	6	.54	17	.....	.....	.....	.....	.....	1.69	16	.....	.....	.....	2.37	19
102	Joplin, Mo.....	.32	13	.58	19	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.90	4
103	Newport, Ky.....	.46	16	1.49	24	.....	.....	.....	.29	4	.51	7	.....	.....	.....	2.75	22

TABLE 29.—Showing, for each object of expense, average annual cost per pupil, based on enrollment, of instruction, operation, and maintenance of elementary schools in a selected list of cities of 30,000 population and over, 1909.

Cities.	Salaries of teachers.		Salaries and expenses of supervisors.		Text-books, stationery, and general school supplies.		Janitors, engineers, and firemen.		Fuel.		Water.		Light and power.		Janitors' supplies and sundry expenses.		Apparatus and manual training equipment.		School libraries.		Repairs and replacement of equipment.		Repairs to buildings.		Total.	
	Average cost.	Rank.	Average cost.	Rank.	Average cost.	Rank.	Average cost.	Rank.	Average cost.	Rank.	Average cost.	Rank.	Average cost.	Rank.	Average cost.	Rank.	Average cost.	Rank.	Average cost.	Rank.	Average cost.	Rank.	Average cost.	Rank.	Average cost.	Rank.
Group I: Median.....	\$20.36	5+	\$0.365	4+	\$0.885	5+	\$1.725	5+	\$0.74	5+	\$0.165	2+	\$0.11	5	\$0.37	4	\$0.09	5	\$0.05	2+	\$0.20	5	\$1.50	5	\$26.54	5+
Middle 50 per cents.....	{19.19 to 21.09}	4 to 7	{.27 to .46}	3 to 6	{.675 to 1.03}	4 to 7	{1.385 to 2.055}	4 to 7	{.515 to .845}	4 to 7	{.....}	.....	{.05 to .16}	3 to 7	{.34 to .51}	3 to 6	{.07 to .19}	3 to 7	.....	.....	{.12 to .56}	3 to 7	{1.09 to 1.70}	3 to 7	{24.285 to 27.65}	4 to 7
Group II: Median.....	17.65	8	.355	5+	.78	8	1.74	8	.86	8	1.05	5+	.07	6	.18	6	.33	4+	.04	2+	.18	5	1.36	7	23.99	8
Middle 50 per cents.....	{15.175 to 18.915}	4 to 11	{.20 to .52}	3 to 6	{.425 to .84}	5 to 11	{1.375 to 2.065}	5 to 11	{.395 to 1.29}	5 to 11	{.07 to .115}	3 to 5	{.045 to .125}	3 to 6	{.155 to .255}	4 to 8	{.17 to .35}	3 to 6	.....	.....	{.10 to .21}	3 to 7	{.925 to 1.95}	5 to 10	{21.745 to 25.725}	5 to 11
Group III: Median.....	15.61	14	.455	9+	1.065	13+	1.57	14	.80	14	.12	5	.08	6	.21	8	.09	5	.06	2+	.245	8+	1.145	11+	21.60	14
Middle 50 per cents.....	{13.455 to 18.16}	8 to 20	{.28 to 1.05}	5 to 14	{.585 to 1.23}	8 to 17	{1.255 to 1.905}	8 to 20	{.61 to .98}	8 to 19	{.06 to .14}	3 to 7	{.06 to .17}	5 to 10	{.14 to .42}	5 to 14	{.08 to .17}	4 to 8	.....	.....	{.13 to .51}	6 to 12	{.72 to 1.67}	6 to 17	{19.43 to 25.50}	8 to 20
Group IV: Median.....	14.30	9	.36	6	.83	9	1.81	9	.865	8+	.105	4+	.06	4	.17	6+	.33	2+	.04	2	.14	7	1.40	8	21.62	9
Middle 50 per cents.....	{12.86 to 16.66}	5 to 12	{.295 to .715}	5 to 8	{.41 to 1.24}	5 to 13	{1.22 to 2.04}	5 to 12	{.59 to 1.31}	5 to 12	{.05 to .125}	3 to 6	{.04 to .13}	3 to 7	{.11 to .47}	4 to 10	.....	.....	.....	.....	{.10 to .38}	4 to 10	{.595 to 1.72}	5 to 11	{1.855 to 23.22}	5 to 13

GROUP I.—CITIES HAVING A POPULATION OF 300,000 OR OVER IN 1910.

1	Chicago, Ill.	\$20.06	4	\$0.08	2	\$0.50	3	\$2.40	9	\$0.98	9	\$0.07	1	\$0.05	3	\$0.14	1	\$0.09	5	\$0.06	3	\$0.08	1	\$2.43	8	\$26.77	6
2	St. Louis, Mo.	18.30	3	.42	5	.95	7	1.40	4	.40	3	.04	3	.17	8	.34	3	.04	2	.02	1	.09	2	.97	2	23.17	3
4	Baltimore, Md.	13.95	1	.04	1	.85	4	1.32	1	.78	5	.01	1	.11	5	.08	1	.08	1	.01	1	.14	4	1.54	6	18.71	1
5	Detroit, Mich.	20.20	5	.27	3	.89	6	2.24	8	.78	7	.01	5	.01	1	.38	5	.75	9	.07	1	.56	1	.79	1	26.31	5
6	Buffalo, N. Y.	14.32	2	1.99	8	.88	5	1.37	3	.75	6	.23	7	.17	8	.64	7	.19	7	.07	4	.56	7	1.34	4	22.51	2
7	San Francisco, Cal.	26.43	10			.19	1	3.38	10	.22	1	.31	4	.04	2	.96	8	.08	4			.46	6	1.50	5	33.57	10
8	Newark, N. J.	20.94	7	.46	6	1.11	8	1.66	5	.63	4	.10	2	.10	4	.19	2	.13	6			1.17	9	1.70	7	28.19	8
10	Washington, D. C.	21.24	8	1.06	7	1.52	9	1.79	6	1.35	10			.12	6	.34	3	.23	8			.12	3	3.55	9	31.32	9
11	Los Angeles, Cal.	21.48	9			.23	2	1.34	2	.32	2			.16	7	.37	4	.07	3		2	.20	5	1.09	3	25.40	4
12	Minneapolis, Minn.	20.52	6	.31	4	1.88	10	1.87	7	.91	8					.51	6					1.11	8			27.11	7

GROUP II.—CITIES HAVING A POPULATION OF 100,000 TO 300,000 IN 1910.

16	St. Paul, Minn.	\$17.15	7	\$0.32	3	\$0.08	1	\$3.18	15	\$0.86	8	\$0.15	7	\$0.11	6	\$0.55	11	\$0.48	8					\$0.84	4	\$23.13	6
17	Portland, Oreg.	19.35	12			.55	6	1.33	3	.33	3	.11	5	.07	4	.19	7	\$0.35	6					1.92	9	24.37	9
20	Oakland, Cal.	24.70	15			.77	10	1.74	8	.31	2	.12	6	.07	7	.25	8	.35	3		4	\$0.63	9	1.95	11	31.10	15
21	Syracuse, N. Y.	15.55	4	.06	1	.73	8	1.41	5	1.53	15			.14	7	.40	10	.17	3					1.01	5	21.00	4
23	Birmingham, Ala.	10.05	1	1.49	8	.09	2	.82	1	.37	4	.06	2			.16	4					.01	1	.57	2	13.62	1
24	Memphis, Tenn.	14.03	3	.62	7	.71	7	1.54	6	.42	5	.11	5	.04	2	.13	6					.53	8	.52	1	18.70	3
25	Scranton, Pa.	16.95	6			1.77	14	2.24	13	1.16	10	.30	8	.03	1	.12	1							.73	3	23.30	7
26	Paterson, N. J.	18.09	9	.06	1	.44	5	1.34	4	.48	6	.06	2			.12	1					.21	7	3.19	4	23.99	8
27	Omaha, Nebr.	18.47	10			.84	11	2.09	12	1.14	9			.04	2	.26	9	.32	4			.09	2	1.95	10	26.20	11
28	Grand Rapids, Mich.	19.42	13	2.63	9	.84	12	1.91	9	.76	7	.08	3	.20	9	.14	2	.34	5			.17	4	3.00	12	29.49	14
29	Nashville, Tenn.	12.25	2	.35	4	.29	3	.85	2	.23	1	.04	1			.18	6			.01	1	.10	3	1.82	8	15.12	2
30	Lowell, Mass.	17.65	8			.76	9	3.10	14	1.39	13	.10	4	.15	8	.17	5							3.03	13	26.35	12
31	Cambridge, Mass.	16.32	5	.06	2	.41	4	2.07	10	1.38	12			.07	4	.15	3	.47	7			.18	5	1.86	7	22.49	5
32	Spokane, Wash.	20.70	14	.36	5	1.82	15	2.08	11	1.20	11			.05	3	1.09	12	.06	2		2			1.01	5	28.40	13
33	Albany, N. Y.	18.58	11	.42	6	1.24	13	1.60	7	1.49	14			.09	5	.16	4	.01	1		3	.20	6	1.29	6	25.13	10

GROUP III.—CITIES HAVING A POPULATION OF 50,000 TO 100,000 IN 1910.

35	Trenton, N. J.	\$19.97	23	\$0.42	9	\$1.16	17	\$1.57	14	\$0.97	19			\$0.06	5	\$0.71	19					\$0.01	1	\$0.14	6	\$0.69	4	\$25.70	21
37	Reading, Pa.	15.71	15	.16	2	1.03	13	2.33	25	1.03	21			.01	1	.25	10	\$0.08	4					.30	10	.70	5	21.60	14
38	Camden, N. J.	19.20	22	.04	1	1.60	20	2.19	24	.91	17	\$0.03	1	.03	3	.17	7	.21	10					.60	13	1.12	11	26.10	23
39	Dallas, Tex.	11.13	2	2.50	18	.21	2	.91	2	.38	3					.05	1							.42	12			15.60	2

TABLE 29.—Showing, for each object of expense, average annual cost per pupil, based on enrollment, of instruction, operation, and maintenance of elementary schools in a selected list of cities of 50,000 population and over, 1909—Continued.

EXPENSES OF CITY SCHOOL SYSTEMS.

GROUP III.—CITIES HAVING A POPULATION OF 50,000 TO 100,000 IN 1910—Continued.

Cities.	Salaries of teachers.		Salaries and expenses of supervisors.		Text-books, stationery, and general school supplies.		Janitors, engineers, and firemen.		Fuel.		Water.		Light and power.		Janitors, supplies and sundry expenses.		Apparatus and manual training equipment.		School libraries.		Repairs and replacement of equipment.		Repairs to buildings.		Total.	
	Average cost.	Rank.	Average cost.	Rank.	Average cost.	Rank.	Average cost.	Rank.	Average cost.	Rank.	Average cost.	Rank.	Average cost.	Rank.	Average cost.	Rank.	Average cost.	Rank.	Average cost.	Rank.	Average cost.	Rank.	Average cost.	Rank.	Average cost.	Rank.
41 Wilmington, Del.....	\$14.31	13	...	...	\$0.78	10	\$1.13	6	\$0.92	18	...	...	...	...	\$0.14	5	\$0.11	7	...	...	...	...	\$1.37	15	\$18.76	6
42 Des Moines, Iowa.....	18.42	21	\$0.49	10	2.04	23	2.12	23	.99	20	\$0.14	7	\$0.08	5	.17	7	.20	9	...	...	...	...	1.67	17	26.30	24
43 Lawrence, Mass.....	21.04	26	1.07	15	1.12	16	2.33	25	1.80	26	...	...	.24	14	.64	17	...	...	...	...	...	...	1.81	18	30.08	27
44 Tacoma, Wash.....	17.90	20	2.27	17	1.13	16	1.73	17	.77	13	.14	7	.06	5	.42	14	.09	5	...	...	...	...	.46	2	26.30	20
45 Kansas City, Kans.....	14.14	11	...	...	.41	4	1.34	8	.76	12	.12	5	.02	2	.16	6	.08	8	...	...	...	...	.97	9	18.05	4
48 Utica, N. Y.....	16.74	19	...	...	.51	6	1.85	19	1.50	24	...	...	.28	13	.55	16	.01	1	\$0.01	1	.03	1	.72	6	22.15	17
49 Elizabeth, N. J.....	14.04	10	.33	7	1.54	19	1.40	10	.65	9	.07	4	.22	12	.14	5	...	...	...	...	.85	16	.46	2	19.70	8
50 Schenectady, N. Y.....	15.61	14	.78	12	.54	7	.99	3	1.05	23	...	...	.21	11	.12	3	.08	4	.11	2	1.53	17	...	...	21.02	11
51 Hoboken, N. J.....	22.01	27	...	...	1.30	18	1.49	12	.59	7	.13	6	.10	8	.36	12	...	...	...	...	.14	6	3.03	23	29.15	25
52 Manchester, N. H.....	16.01	16	...	...	.71	9	1.08	5	1.79	25	.20	8	.12	9	.22	9	.10	6	...	...	.22	8	1.17	12	21.62	15
55 Wilkes-Barre, Pa.....	13.27	5	.24	3	1.54	19	1.36	9	.83	16	.06	2	.06	5	.17	7	...	...	...	...	1.63	18	...	...	19.16	7
56 Peoria, Ill.....	20.44	24	.79	13	.40	3	1.79	18	.67	10	...	...	.08	6	.05	1	.47	11	...	...	...	...	1.36	14	26.05	22
57 Erie, Pa.....	13.50	8	2.17	16	1.11	15	1.89	20	1.04	22	...	...	.21	11	.13	4	.03	2	...	...	.12	5	.62	3	20.82	10
58 Savannah, Ga.....	12.59	4	...	...	...	...	.57	1	.22	1	...	...	...	...	.08	2	...	...	...	...	...	...	.25	1	13.71	1
59 Oklahoma, Okla.....	13.41	7	.66	11	.83	11	1.17	7	.42	4	...	...	...	...	...	...	...	...	...	...	.77	15	1.21	13	18.39	5
60 Harrisburg, Pa.....	13.33	6	.31	6	1.84	22	1.92	21	.80	14	.03	1	.09	7	.06	3	...	...	...	...	.62	14	1.08	10	20.10	9
63 East St. Louis, Ill.....	12.55	3	3.03	19	.63	8	2.76	26	.47	6	.24	9	.04	4	.21	8	.17	8	.14	8	.18	7	.96	8	21.38	13
67 Bayonne, N. J.....	21.00	25	.28	5	1.76	21	1.69	16	.72	11	...	...	...	...	.93	20	.09	5	...	...	.42	12	2.39	20	29.28	26
68 Johnstown, Pa.....	14.21	12	.38	8	.95	12	1.93	22	.63	8	.26	10	.02	2	...	...	...	...	...	...	...	...	.76	7	22.14	16
69 Passaic, N. J.....	16.51	18	...	...	1.16	17	1.44	11	.91	17	.06	3	.17	10	.41	13	...	...	...	...	.08	4	1.54	16	22.28	18
70 Wichita, Kans.....	10.96	1	.26	4	.43	5	1.06	4	.44	5	...	...	...	...	.67	18	...	...	...	...	.27	9	2.16	19	16.25	3
71 Covington, Ky.....	16.35	17	1.05	14	.04	1	1.53	13	.36	2	.06	3	.10	8	.32	11	...	...	...	...	.07	3	2.44	21	22.32	19
72 Allentown, Pa.....	14.02	9	.26	4	1.10	14	1.68	15	.81	15	...	...	.06	5	.49	15	...	...	...	...	.14	6	2.74	22	21.30	12

TABLE 30.—Showing for each object of expense average annual cost per pupil, based on enrollment, of instruction, operation, and maintenance of secondary schools in a selected list of cities of 30,000 population and over, 1909.

Cities.	Salaries of teachers.		Salaries and expenses of supervisors.		Text-books, stationery, and general school supplies.		Janitors, engineers, and firemen.		Fuel.		Water.		Light and power.		Janitors' supplies and sundry expenses.		Apparatus and manual training equipment.		School libraries.		Repairs and replacements of equipment.		Repairs to buildings.		Total.	
	Average cost.	Rank.	Average cost.	Rank.	Average cost.	Rank.	Average cost.	Rank.	Average cost.	Rank.	Average cost.	Rank.	Average cost.	Rank.	Average cost.	Rank.	Average cost.	Rank.	Average cost.	Rank.	Average cost.	Rank.	Average cost.	Rank.	Average cost.	Rank.
Group I: Median.....	\$50.985	5+	\$1.18	3	\$2.745	5+	\$3.405	5+	\$1.28	5+	\$1.85	2+	\$0.38	5	\$0.82	5+	\$0.92	5	\$0.44	2+	\$0.37	5	\$2.85	5	\$64.39	5+
Middle 50 per cent.....	{46.32 to 54.30}	4 to 7			{1.74 to 3.61}	4 to 7	{2.705 to 4.555}	4 to 7	{.91 to 1.595}	4 to 7			{.26 to .49}	3 to 6	{.425 to 1.30}	4 to 7	{.88 to 1.14}	3 to 7			{.19 to .74}	3 to 7	{2.27 to 3.32}	3 to 7	{57.995 to 71.32}	4 to 7
Group II: Median.....	36.15	8	3.26	1+	2.17	7+	2.95	8	1.24	7+	.23	5	.51	6	.70	8	.695	5+	.34	3	.275	4+	1.79	7	48.39	8
Middle 50 per cent.....	{32.73 to 43.50}	5 to 11			{.32 to 2.97}	5 to 10	{2.12 to 3.82}	5 to 11	{.855 to 1.68}	5 to 10	{.16 to .26}	3 to 7	{.16 to .73}	4 to 8	{.27 to 1.18}	5 to 10	{.295 to 1.74}	4 to 7			{.14 to .35}	3 to 5	{1.31 to 2.31}	4 to 10	{40.415 to 54.435}	5 to 11
Group III: Median.....	36.93	13	3.39	6	3.58	12+	2.84	14	1.29	12+	.205	6+	.40	10	.57	13	1.80	7+	.405	3+	.51	8	1.42	12	49.47	14
Middle 50 per cent.....	{32.725 to 39.485}	7 to 19	{2.405 to 3.96}	4 to 8	{1.69 to 4.40}	7 to 18	{2.09 to 3.74}	8 to 20	{.865 to 1.705}	8 to 17	{.14 to .28}	4 to 9	{.19 to .56}	5 to 14	{.29 to 1.02}	7 to 19	{1.49 to 3.035}	5 to 10			{.23 to .82}	5 to 12	{.99 to 3.225}	7 to 17	{42.915 to 55.775}	8 to 20
Group IV: Median.....	29.25	9	3.38	4	2.015	8+	2.41	9	1.59	8+	.135	4+	.37	6+	.455	8+	1.575	2+	.28	3+	.26	5	1.50	7	39.98	9
Middle 50 per cent.....	{25.10 to 34.29}	5 to 13			{.92 to 2.67}	5 to 12	{1.93 to 4.01}	5 to 13	{1.18 to 2.03}	5 to 12	{.095 to .255}	3 to 6	{.165 to .705}	4 to 9	{.35 to .73}	5 to 12					{.16 to .96}	3 to 7	{1.01 to 2.27}	4 to 10	{35.70 to 46.46}	5 to 13

GROUP I.—CITIES HAVING A POPULATION OF 300,000 OR OVER IN 1910.

1	Chicago, Ill.....	5	\$0.15	1	\$2.91	6	\$4.21	7	\$1.69	8	5	\$0.37	3	\$0.88	3
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6	Buffalo, N. Y.	30.24	1	2.81	4	2.58	5	2.80	4	.97	4	.25	3	.73	7	1.35	8	1.01	6	.31	2	.18	2	2.27	3	45.50	1
7	San Francisco, Cal.	55.30	821	1	2.90	5	.39	1	.47	4	.16	2	1.25	7	.23	137	5	2.85	5	64.13	5
8	Newark, N. J.	64.24	9	.....	.....	3.81	8	3.91	6	.85	3	.12	2	1.18	8	.62	5	1.14	7	.....	.....	2.36	9	3.32	7	81.55	9
10	Washington, D. C.	52.52	6	4.40	5	1.23	3	2.57	2	1.50	7	.....	.....	.49	6	.48	4	1.86	9	.85	4	.74	7	3.18	6	69.82	7
11	Los Angeles, Cal.	48.33	4	.....	.....	.63	2	2.46	1	.72	2	.....	.....	.36	4	1.02	6	1.37	8	.57	3	.57	6	2.72	4	58.75	4
12	Minneapolis, Minn.	30.08	2	.82	2	3.41	7	2.61	3	1.42	6	.....	.....	.....	.....	.17	2	.52	2	.....	.....	2.35	8	.....	.....	47.38	2

GROUP II.—CITIES HAVING A POPULATION OF 100,000 TO 300,000 IN 1910.

16	St. Paul, Minn.	42.20	11
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GROUP III.—CITIES HAVING A POPULATION OF 50,000 TO 100,000 IN 1910.

35	Trenton, N. J.	47.21	24	\$4.10	17	\$3.01	17	\$1.27	10	\$0.43	13	\$0.83	17	\$10.11	14	\$1.42	12	\$68.87	24
37	Reading, Pa.	35.28	11	.....	.....	5.98	21	4.29	24	1.28	11	.....	.....	.33	8	1.21	22	.....	.....	.....	.....	.....	.....	.55	4	49.47	14
38	Camden, N. J.	44.50	21	\$0.91	2	3.63	13	8.35	27	1.16	9	.....	.....	.63	15	1.01	18	5.77	12	.....	.....	1.57	16	16.40	23	83.93	25
39	Dallas, Tex.	39.53	20	2.94	5	.75	4	4.21	22	1.37	13	.....	.....	.....	.....	.29	7	1.67	6	\$1.66	6	.14	3	.....	.....	52.56	19
41	Wilmington, Del.	27.60	4	.....	.....	2.71	10	2.07	7	.86	7	.....	.....	.....	.....	.57	13	.....	.....	.....	.....	.....	.....	2.03	13	35.84	3
42	Des Moines, Iowa	32.90	7	3.87	8	1.03	6	3.89	21	2.39	23	\$0.22	7	.28	6	.12	2	1.72	7	.....	.....	.....	.....	4.98	20	51.40	18
43	Lawrence, Mass.	45.40	22	.....	.....	3.87	15	2.11	8	2.41	24	.....	.....	1.66	19	.17	5	.....	.....	.....	.....	.04	1	.54	3	56.20	21
44	Tacoma, Wash.	32.55	6	2.26	3	2.02	9	2.28	9	1.29	12	.98	12	.72	16	1.03	20	1.88	8	.33	3	1.39	15	.44	2	47.17	12
45	Kansas City, Kans.	36.97	14	.....	.....	1.69	7	4.23	23	1.58	15	.39	10	1.02	17	1.02	19	2.23	9	.17	1	.51	8	1.29	9	51.10	17
48	Utica, N. Y.	38.47	17	.....	.....	1.77	8	5.18	25	.66	4	.....	.....	.29	7	.59	14	.02	1	.....	.....	.06	2	3.74	18	50.78	16
49	Elizabeth, N. J.	33.45	9	.....	.....	3.53	12	2.93	16	1.06	8	.18	5	.03	1	.32	9	.....	.....	.....	.....	1.11	13	2.15	15	44.76	10
50	Schenectady, N. Y.	37.98	16	.....	.....	.....	.....	1.89	6	1.59	16	.....	.....	1.23	18	.36	10	1.44	4	.48	4	.....	.....	2.14	14	47.11	11

TABLE 30.—Showing for each object of expense average annual cost per pupil, based on enrollment, of instruction, operation, and maintenance of secondary schools in a selected list of cities of 30,000 population and over, 1909—Continued.

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GROUP III.—CITIES HAVING A POPULATION OF 50,000 TO 100,000 IN 1910—Continued.

Cities.	Salaries of teachers.		Salaries and expenses of supervisors.		Text-books, stationery, and general school supplies.		Janitors, engineers, and firemen.		Fuel.		Water.		Light and power.		Janitors' supplies and sundry expenses.		Apparatus and manual training equipment.		School libraries.		Repairs and replacements of equipment.		Repairs to buildings.		Total.	
	Average cost.	Rank.	Average cost.	Rank.	Average cost.	Rank.	Average cost.	Rank.	Average cost.	Rank.	Average cost.	Rank.	Average cost.	Rank.	Average cost.	Rank.	Average cost.	Rank.	Average cost.	Rank.	Average cost.	Rank.	Average cost.	Rank.	Average cost.	Rank.
51 Hoboken, N. J.	\$38.20	26	.....	.....	\$9.75	22	\$6.06	26	\$1.90	20	\$0.06	3	\$0.17	3	\$0.81	16	\$3.55	11	.....	.....	\$0.51	8	\$6.55	22	\$97.55	27
52 Manchester, N. H.	28.00	5	.....	.....	4.09	16	2.33	10	1.92	21	.28	9	.41	11	.51	12	.....	.....	.....	.....	.78	11	1.31	10	40.23	4
55 Wilkes-Barre, Pa.	20.60	1	\$0.05	1	1.02	5	1.06	1	.26	1	.03	1	.11	2	.39	11	.68	2	.....	.....	1.27	14	.....	.....	25.47	1
56 Peoria, Ill.	36.93	13	4.05	9	.55	2	2.53	11	1.74	18	.....	.....	.19	5	.15	4	.71	3	.....	.....	.....	.....	1.41	11	48.26	13
57 Erie, Pa.	24.91	3	5.93	11	5.19	20	2.89	15	1.67	17	.....	.....	.40	10	2.19	24	.....	.....	.....	.....	.23	5	.38	1	43.79	7
58 Savannah, Ga.	32.96	8	3.39	6	.....	.....	1.83	5	.41	2	.....	.....	.19	4	.14	3	1.54	5	.....	.....	.....	.....	.....	.....	40.46	5
59 Oklahoma, Okla.	35.48	12	.....	.....	2.93	11	1.16	2	.41	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.82	12	1.20	8	42.00	6
60 Harrisburg, Pa.	39.46	19	.....	.....	4.40	18	3.59	20	1.89	19	.04	2	.42	12	.08	1	2.52	10	.....	.....	.47	6	2.48	16	55.35	20
63 East St. Louis, Ill.	37.06	15	3.73	7	.70	3	3.43	19	1.42	14	.78	11	.39	9	.31	8	.....	.....	\$0.22	2	.63	10	.93	6	49.60	15
67 Bayonne, N. J.	47.14	23	.....	.....	4.86	19	3.20	18	1.27	10	.....	.....	.....	.....	3.11	25	.....	.....	.....	.....	.....	.....	2.71	17	62.29	23
68 Johnstown, Pa.	39.37	18	4.39	10	10.10	23	2.84	14	.52	3	.14	4	.03	1	.....	.....	.....	.....	.....	.....	.....	.....	4.19	19	61.58	22
69 Passaic, N. J.	65.36	25	.....	.....	12.22	24	2.75	13	1.29	12	.19	6	.56	14	.19	6	7.46	13	.....	.....	.....	.....	.....	.....	90.02	26
70 Wichita, Kans.	20.95	2	2.55	4	.48	1	1.56	4	.86	6	.....	.....	.....	.....	.69	15	.....	.....	.....	.....	.....	.....	.61	5	27.70	2
71 Covington, Ky.	32.55	6	.....	.....	.....	.....	2.72	12	.72	5	.26	8	.40	10	1.29	23	.....	.....	.....	.....	.22	4	6.41	21	44.57	9
72 Allentown, Pa.	33.72	10	.....	.....	3.72	14	1.53	3	2.11	22	.....	.....	.....	.....	1.05	21	.....	.....	.86	5	.....	.....	1.05	7	44.04	8

GROUP IV.—CITIES HAVING A POPULATION OF 30,000 TO 50,000 IN 1910.

76 Sioux City, Iowa.	\$16.66	12	\$0.24	3	\$0.17	2	\$2.02	11	\$1.39	13	\$0.12	6	\$0.02	1	\$0.47	10	.....	.....	.....	.....	.....	.....	\$1.75	12	\$22.84	12
77 Lancaster, Pa.	12.33	4	.....	.....	.89	10	1.82	10	.86	8	.10	4	.03	2	.68	12	.....	.....	.....	.....	\$0.66	12	1.28	7	18.65	7
78 Atlantic City, N. J.	13.38	7	.....	.....	1.65	17	1.22	5	1.41	14	.46	9	.....	.....	2.52	13	.....	.....	.....	.....	.....	.....	1.69	11	22.33	11
79 Little Rock, Ark.	12.91	6	.59	7	.45	6	.93	3	.59	5	.18	8	.09	6	.18	7	.....	.....	.....	.....	.38	10	.53	3	16.83	4

81	Bay City, Mich.	14.30	9	1.96	12	.83	9	1.81	9	.77	7	.11	5	.04	3	.24	9	.06	2	1.50	10	21.62	9
82	York, Pa.	12.86	5	.30	5	1.33	14	1.64	7	.87	9	.13	7	.06	4	.08	2	.14	7	1.22	6	18.55	5
85	Malden, Mass.	17.48	13	.36	6	1.16	12	1.81	9	1.75	16	.06	.06	.06	4	.08	2	.10	4	1.40	8	24.20	14
86	Pueblo, Colo.	13.95	8	1.10	10	.64	8	1.68	8	.55	3	.06	3	.07	5	.16	6	.32	9	.64	5	19.17	8
87	Haverhill, Mass.	18.75	15	.36	6	1.24	13	2.08	14	1.46	15	.06	.06	.06	4	.11	3	.18	8	1.75	12	26.12	17
88	New Britain, Conn.	10.05	2	.30	5	1.54	16	1.13	4	1.06	11	.06	.06	.28	10	.06	1	.06	.06	.37	1	14.86	2
89	Topeka, Kans.	19.29	16	.29	4	.53	7	2.10	15	.91	10	.02	1	.14	8	.14	5	.13	6	1.44	9	26.33	16
92	Chester, Pa.	14.98	10	.42	.00	1.13	11	2.12	16	.00	.00	.00	.00	.00	.00	3.96	14	.00	.00	.00	.00	22.19	10
93	Dubuque, Iowa	17.54	14	1.42	11	.18	3	2.06	13	1.31	12	.02	1	.02	1	.06	1	.09	3	2.12	14	25.20	15
95	Racine, Wis.	14.30	9	.76	9	.23	4	1.45	6	.64	6	.06	.06	.13	7	.16	6	.12	5	.38	2	18.60	6
96	Knoxville, Tenn.	8.64	1	.12	1	.13	1	.83	1	.18	1	.04	2	.06	.06	.11	4	.52	11	.55	4	11.12	1
97	New Castle, Pa.	15.86	11	.67	8	1.46	15	2.04	12	.57	4	.06	.06	.16	9	.59	11	.01	1	1.86	13	23.22	13
102	Joplin, Mo.	10.20	3	.21	2	.41	5	.90	2	.35	2	.06	.06	.06	.06	.23	8	3.90	13	.06	.06	16.20	3

TABLE 31.—Showing ratio of expenses of schools to total city expenses and to expenses of police department and expenses of schools per capita of population in 103 cities of 30,000 population and over, 1909.

Cities.	Expenses of schools.	Total city expenses.	Ratio of school expenses to total city expenses.	Rank.	Expenses of police department.	Ratio of school expenses to expenses of police department.	Rank.	Population 1908. [Revised estimate.]	Expenses of schools per capita of population.	Rank.
Group I: Median.....	0.259	7	.....	2.12	7	.....	\$4.26	7
Middle 50 per cents.....238 to .316	4 to 10	.....	1.55 to 2.93	4 to 10	.....	3.96 to 4.76	4 to 10
Group II: Median.....3345	10+	.....	3.01	10+	.....	4.28	10+
Middle 50 per cents.....303 to .385	6 to 15	.....	2.23 to 3.41	6 to 15	.....	3.76 to 4.45	6 to 15
Group III: Median.....365	20+	.....	3.42	21+	.....	3.68	21+
Middle 50 per cents.....330 to .419	12 to 30	.....	2.51 to 4.23	12 to 30	.....	3.30 to 4.33	12 to 30
Group IV: Median.....377	14+	.....	4.33	14+	.....	3.685	14+
Middle 50 per cents.....342 to .437	8 to 21	.....	3.20 to 5.39	8 to 21	.....	3.24 to 4.41	8 to 21

GROUP I.—CITIES HAVING A POPULATION OF 300,000 OR OVER IN 1910.

1	Chicago, Ill.....	99,492,789	\$36,614,344	0.259	7	96,121,585	1.55	4	2,092,869	\$4.54	9
2	St. Louis, Mo.....	2,798,654	11,977,362	.234	3	1,975,272	1.41	2	665,802	4.20	6
3	Cleveland, Ohio.....	2,374,107	7,494,451	.317	11	806,865	2.94	11	523,187	4.53	8
4	Baltimore, Md.....	1,824,823	7,586,501	.240	5	1,245,921	1.47	3	549,079	3.32	2
5	Detroit, Mich.....	1,706,858	6,059,654	.282	9	803,614	2.12	7	426,592	4.00	5
6	Buffalo, N. Y.....	1,607,378	6,751,968	.238	4	954,176	1.69	5	405,714	3.96	4
7	San Francisco, Cal.....	1,717,249	8,536,968	.201	1	1,412,719	1.22	1	402,836	4.26	7
8	Milwaukee, Wis.....	1,314,257	5,202,614	.262	6	539,275	2.42	8	350,852	3.66	3
9	Newark, N. J.....	1,944,549	6,141,072	.316	10	758,748	2.56	9	322,784	6.02	12
10	New Orleans, La.....	952,247	4,122,356	.231	2	315,865	3.01	12	329,207	2.89	1

11	Washington, D. C.....	\$2,055,915	\$7,816,180	.263	8	\$1,109,903	1.86	6	321,128	\$6.40	13
12	Los Angeles, Cal.....	1,288,852	3,657,413	.352	12	441,213	2.93	10	270,491	4.76	10
13	Minneapolis, Minn.....	1,369,481	3,698,710	.370	13	324,278	4.24	13	286,241	4.78	11

GROUP II.—CITIES HAVING A POPULATION OF 100,000 TO 300,000 IN 1910.

14	Jersey City, N. J.....	\$960,225	\$2,809,977	0.342	12	\$544,878	1.76	1	254,286	\$3.78	7
15	Providence, R. I.....	954,168	3,239,020	.265	3	433,262	2.20	5	214,445	4.45	14
16	St. Paul, Minn.....	755,981	2,480,356	.304	7	263,678	2.86	8	207,928	3.64	4
17	Portland, Oreg.....	671,062	1,747,566	.383	14	190,354	3.53	16	178,506	3.76	6
18	Columbus, Ohio.....	693,826	1,734,719	.401	17	203,421	3.41	15	163,625	4.24	10
19	Toledo, Ohio.....	645,916	1,675,363	.385	15	195,597	3.30	13	161,533	4.00	8
20	Oakland, Cal.....	586,014	1,755,781	.333	10	177,529	3.31	14	110,070	5.32	19
21	Syracuse, N. Y.....	584,536	1,927,157	.303	6	192,000	3.05	12	129,574	4.51	15
22	New Haven, Conn.....	556,599	1,663,299	.336	11	249,986	2.23	6	128,747	4.32	11
23	Birmingham, Ala.....	160,318	646,068	.248	2	79,901	2.02	4	62,146	2.58	3
24	Memphis, Tenn.....	288,401	1,369,480	.210	1	154,814	1.86	2	115,107	2.51	1
25	Scranton, Pa.....	552,007	1,108,183	.498	20	91,057	6.06	19	124,810	4.42	13
26	Paterson, N. J.....	524,307	1,328,554	.394	16	176,103	2.98	10	120,188	4.36	12
27	Omaha, Nebr.....	544,819	1,474,331	.371	13	129,037	4.23	17	120,006	4.54	16
28	Grand Rapids, Mich.....	538,899	1,308,373	.412	18	114,306	4.73	18	107,191	5.03	18
29	Nashville, Tenn.....	274,065	910,979	.301	5	107,606	2.54	7	108,768	2.52	2
30	Lowell, Mass.....	429,964	1,338,131	.321	8	149,716	2.87	9	101,908	4.22	9
31	Cambridge, Mass.....	507,322	1,570,390	.323	9	166,957	3.04	11	102,038	4.97	17
32	Spokane, Wash.....	541,795	1,207,288	.448	19	76,563	7.07	20	92,713	5.84	20
33	Albany, N. Y.....	363,556	1,288,255	.282	4	190,864	1.91	3	99,311	3.66	5

GROUP III.—CITIES HAVING A POPULATION OF 80,000 TO 100,000 IN 1910.

34	Hartford, Conn.....	\$535,300	\$1,565,775	0.341	15	\$164,272	3.26	20	95,294	\$5.61	37
35	Trenton, N. J.....	408,423	976,591	.418	30	129,276	3.17	19	91,955	4.44	30
36	New Bedford, Mass.....	331,048	1,145,306	.288	7	137,152	2.42	8	88,222	3.75	22
37	Reading, Pa.....	282,263	707,344	.399	24	67,480	4.18	31	99,441	3.06	9
38	Camden, N. J.....	419,283	1,008,680	.415	29	148,379	2.83	15	90,240	4.65	33
39	Dallas, Tex.....	234,641	714,640	.328	11	74,230	3.16	18	82,464	2.84	8
40	Springfield, Mass.....	505,700	1,386,849	.364	20	123,580	4.06	30	83,107	6.09	40
41	Wilmington, Del.....	235,293	693,921	.339	14	100,947	2.33	6	85,340	2.76	7
42	Des Moines, Iowa.....	495,745	1,058,440	.468	38	83,456	5.94	39	82,561	6.01	39
43	Lawrence, Mass.....	293,398	884,708	.331	12	86,796	3.38	21	79,901	3.75	22
44	Tacoma, Wash.....	363,142	951,484	.382	22	74,993	4.84	34	70,427	5.16	36
45	Kansas City, Kans.....	253,355	604,009	.420	31	66,661	3.80	27	73,107	3.49	18

TABLE 31.—Showing ratio of expenses of schools to total city expenses and to expenses of police department and expenses of schools per capita of population in 103 cities of 50,000 population and over, 1909—Continued.

GROUP III.—CITIES HAVING A POPULATION OF 50,000 TO 100,000 IN 1910—Continued.

	Cities.	Expenses of schools.	Total city expenses.	Ratio of school expenses to total city expenses.	Rank.	Expenses of police department.	Ratio of school expenses to expenses of police department.	Rank.	Population 1908. [Revised estimate.]	Expenses of schools per capita of population.	Rank.
46	St. Joseph, Mo.....	\$269,754	\$695,010	.388	23	\$89,915	3.00	17	77,403	\$3.48	17
47	Troy, N. Y.....	330,346	1,111,899	.298	8	131,821	2.50	11	76,604	4.31	27
48	Utica, N. Y.....	268,696	859,380	.313	10	62,914	4.27	32	70,275	3.82	24
49	Elizabeth, N. J.....	212,509	612,447	.347	18	84,685	2.39	7	68,543	3.10	10
50	Schenectady, N. Y.....	242,238	774,570	.312	9	89,937	2.69	13	67,205	3.61	21
51	Hoboken, N. J.....	300,404	895,041	.403	25	164,438	2.23	5	68,456	3.80	23
52	Manchester, N. H.....	157,726	649,375	.243	4	57,707	2.73	14	68,149	2.32	5
53	Evansville, Ind.....	232,761	531,902	.438	33	67,336	3.46	22	67,721	3.44	15
54	Norfolk, Va.....	144,720	754,300	.192	2	122,133	1.19	4	65,394	2.21	4
55	Wilkes-Barre, Pa.....	221,600	548,227	.404	26	58,174	3.80	28	64,184	3.45	16
56	Peoria, Ill.....	270,458	816,153	.331	12	107,355	2.53	12	61,691	4.39	29
57	Erie, Pa.....	217,215	531,471	.409	27	54,163	4.00	29	63,905	3.40	14
58	Savannah, Ga.....	124,860	612,654	.244	5	119,562	1.04	1	64,338	1.94	3
59	Oklahoma, Okla.....	189,447	415,147	.456	36	26,186	7.23	41	44,779	4.23	25
60	Harrisburg, Pa.....	253,430	570,699	.444	34	48,456	5.23	38	59,863	4.23	26
61	Charleston, S. C.....	108,359	584,649	.177	1	95,682	1.08	3	58,267	1.78	2
62	Portland, Me.....	257,563	909,186	.283	6	90,683	2.84	16	56,970	4.52	31
63	East St. Louis, Ill.....	187,189	542,195	.346	17	77,254	2.42	9	52,751	3.55	20
64	Holyoke, Mass.....	248,410	745,250	.333	13	69,354	3.58	23	54,701	4.54	32
65	Jacksonville, Fla.....	85,088	426,583	.199	3	80,509	1.06	2	48,933	1.74	1
66	Brockton, Mass.....	263,474	705,165	.360	19	67,715	3.75	25	53,443	4.75	34
67	Bayonne, N. J.....	287,089	620,880	.462	37	76,122	3.77	26	50,436	5.70	38
68	Johnstown, Pa.....	183,061	374,439	.490	41	37,086	4.94	35	51,948	3.53	19
69	Passaic, N. J.....	209,331	444,796	.470	39	28,050	7.45	42	48,259	4.33	28
70	Wichita, Kans.....	138,570	337,549	.410	28	28,975	4.78	33	44,642	3.11	11
71	Covington, Ky.....	134,819	390,680	.345	16	55,060	2.45	10	52,095	2.59	6
72	Allentown, Pa.....	162,076	340,929	.475	40	26,068	6.21	40	49,211	3.30	12
73	Springfield, Ill.....	185,208	505,274	.366	21	50,894	3.64	24	47,471	3.90	25
74	Saginaw, Mich.....	241,044	533,814	.451	35	47,528	5.07	37	49,265	4.89	35
75	Canton, Ohio.....	157,771	374,257	.422	32	31,566	4.99	36	47,453	3.32	13

EXPENSES OF CITY SCHOOL SYSTEMS.

GROUP IV.—CITIES HAVING A POPULATION OF 30,000 TO 50,000 IN 1910.

76	Sioux City, Iowa.....	\$201,948	\$422,008	0.478	24	\$37,573	5.37	20	45,391	\$4.45	28
77	Lancaster, Pa.....	137,387	323,539	.424	20	29,074	4.72	16	46,131	2.96	7
78	Atlantic City, N. J.....	184,872	868,261	.213	3	107,485	1.78	2	42,858	4.31	19
79	Little Rock, Ark.....	128,597	335,120	.384	16	43,086	1.98	3	43,589	2.96	6
80	Rockford, Ill.....	163,741	345,806	.478	23	29,550	5.53	22	42,913	3.32	9
81	Bay City, Mich.....	168,253	385,289	.437	21	31,247	5.39	21	43,721	3.85	16
82	York, Pa.....	146,104	287,118	.509	26	23,850	6.11	25	42,591	3.43	11
83	Sacramento, Cal.....	220,688	642,720	.343	10	43,927	5.03	19	41,768	5.28	26
84	Chattanooga, Tenn.....	86,702	428,824	.202	2	62,576	1.39	1	42,525	2.04	1
85	Malden, Mass.....	226,888	589,740	.385	17	46,570	4.87	17	41,996	5.40	27
86	Pueblo, Colo.....	187,326	550,520	.804	5	49,983	3.75	12	41,405	4.53	24
87	Haverhill, Mass.....	184,473	548,459	.337	7	42,376	4.35	15	41,738	4.43	22
88	New Britain, Conn.....	143,210	389,050	.368	12	33,345	4.30	14	40,931	3.50	13
89	Topeka, Kans.....	201,880	381,909	.530	27	25,120	8.04	28	43,357	4.65	25
90	Davenport, Iowa.....	226,280	597,955	.380	15	37,303	6.07	24	41,886	5.40	27
91	Wheeling, W. Va.....	153,298	394,663	.388	18	47,877	3.20	8	41,116	3.73	15
92	Chester, Pa.....	122,064	271,574	.449	22	29,767	4.10	13	37,673	3.24	8
93	Dubuque, Iowa.....	116,346	339,695	.343	8	33,723	3.45	10	39,717	2.93	5
94	Woonsocket, R. I.....	97,801	334,744	.292	4	33,917	2.89	6	35,845	2.73	4
95	Racine, Wis.....	140,916	337,999	.417	19	17,766	7.92	27	35,804	3.94	17
96	Knoxville, Tenn.....	79,215	316,925	.150	1	38,023	2.08	4	35,641	2.23	2
97	New Castle, Pa.....	146,085	296,778	.492	25	22,911	6.38	26	34,867	4.19	13
98	Joliet, Ill.....	117,329	339,880	.345	11	36,475	3.21	9	33,659	3.48	12
99	Auburn, N. Y.....	123,028	381,455	.323	6	33,271	3.69	11	33,844	3.64	14
100	Taunton, Mass.....	142,618	415,829	.343	9	47,266	3.02	7	33,014	4.32	20
101	Oshkosh, Wis.....	107,605	288,184	.374	14	17,901	6.01	23	32,105	3.35	10
102	Joplin, Mo.....	120,347	226,893	.530	28	24,628	4.89	18	27,278	4.41	21
103	Newport, Ky.....	80,409	216,923	.371	13	33,873	2.37	5	29,926	2.69	3

TABLE 32.—Showing average annual cost per pupil, based on enrollment, of instruction, operation, and maintenance of elementary schools, including kindergartens, and of secondary schools and the relation of these costs to each other, in a selected list of cities, 1909.

	Fiscal year ended—	Elementary schools.				Secondary schools.				Cost per pupil—Ratio of elementary schools to secondary schools.	Rank.
		Expenses.	Enroll-ment.	Cost per pupil.	Rank, cost per pupil.	Expenses.	Enroll-ment.	Cost per pupil.	Rank, cost per pupil.		
Group I: Median.....	\$26.54	5+	.....	.....	\$64.39	5+	2.27	5+
Middle 50 per cents	{ 24.34 to 27.65	{ 4 to 7	.....	.....	{ 57.99 to 71.32	{ 4 to 7	{ 1.965 to 2.65	{ 3 to 7+
Group II: Median.....	24.29	8	.....	.....	48.50	8	1.84	8
Middle 50 per cents	{ 21.745 to 25.775	{ 5 to 11	.....	.....	{ 40.405 to 53.935	{ 5 to 11	{ 1.71 to 2.34	{ 6 to 12+
Group III: Median.....	21.60	14	.....	.....	49.56	14	2.27	14
Middle 50 per cents	{ 19.43 to 25.50	{ 8 to 20	.....	.....	{ 43.875 to 54.91	{ 8 to 20	{ 1.89 to 2.775	{ 8 to 20+
Group IV: Median.....	21.71	9	.....	.....	39.98	9	1.90	7
Middle 50 per cents	{ 18.55 to 23.22	{ 5 to 13	.....	.....	{ 35.70 to 46.46	{ 5 to 13	{ 1.72 to 2.465	{ 4 to 10+

GROUP I.—CITIES HAVING A POPULATION OF 300,000 AND OVER IN 1910.

1	Chicago, Ill.....	June 30, 1909	\$7,360,704	275,082	\$26.77	6	\$1,073,247	16,616	\$64.65	6	2.41	7
2	St. Louis, Mo.....	.....do.....	1,906,210	82,324	23.17	3	407,571	4,569	89.20	10	3.85	9
4	Baltimore, Md.....	Dec. 31, 1908	1,429,100	76,416	18.71	1	259,859	3,589	72.82	8	3.90	10
5	Detroit, Mich.....	June 30, 1909	1,299,280	49,394	26.31	5	297,035	5,189	57.24	3	2.18	4
6	Buffalo, N. Y.....	.....do.....	1,299,344	57,662	22.51	2	198,330	4,362	45.50	1	2.02	3
7	San Francisco, Cal.....	.....do.....	1,332,016	39,717	33.57	10	206,526	3,224	64.13	5	1.91	2
9	Newark, N. J.....	.....do.....	1,516,593	53,844	28.19	8	155,729	1,912	81.55	9	2.89	8
11	Washington, D. C.....	.....do.....	1,534,037	48,968	31.32	9	386,116	5,525	69.82	7	2.23	5
12	Los Angeles, Cal.....	.....do.....	969,739	38,234	25.40	4	256,105	4,353	58.75	4	2.31	6
13	Minneapolis, Minn.....	Dec. 31, 1908	1,091,649	40,326	27.11	7	251,518	5,311	47.38	2	1.75	1

GROUP II.—CITIES HAVING A POPULATION OF 100,000 TO 300,000 IN 1910.

16	St. Paul, Minn.....	Dec. 31, 1908	\$596,202	25,761	\$23.13	6	\$141,532	2,525	\$55.92	12	2.42	12
17	Portland, Oreg.....	.....do.....	527,444	21,667	24.37	8	82,954	2,028	40.90	5	1.68	3
20	Oakland, Cal.....	June 30, 1909	462,936	14,933	31.10	15	98,017	1,847	52.95	11	1.70	4
21	Syracuse, N. Y.....	Dec. 31, 1908	420,148	19,968	21.00	4	103,611	2,568	41.51	6	1.98	9
23	Birmingham, Ala.....	June 30, 1909	114,305	8,404	13.62	1	34,443	1,029	33.48	3	2.47	13
24	Memphis, Tenn.....	.....do.....	246,388	13,192	18.70	3	22,909	884	25.89	2	1.39	1
25	Scranton, Pa.....	.....do.....	306,503	17,038	23.30	9	101,760	1,391	73.30	15	3.15	15
26	Paterson, N. J.....	.....do.....	426,816	17,752	23.99	7	61,763	1,549	39.91	4	1.66	2
27	Omaha, Nebr.....	Dec. 31, 1908	417,674	16,580	25.20	11	93,587	2,051	45.72	7	1.81	7
28	Grand Rapids, Mich.....	June 30, 1909	410,329	13,923	29.49	14	92,513	1,811	51.15	9	1.73	6
29	Nashville, Tenn.....	Dec. 31, 1908	230,939	15,296	15.12	2	26,909	1,041	25.91	1	1.72	5
30	Lowell, Mass.....	.....do.....	321,391	12,210	26.35	12	58,746	1,214	48.39	8	1.84	8
31	Cambridge, Mass.....	Mar. 31, 1909	346,102	15,399	22.49	5	120,712	1,736	69.40	14	3.06	14
32	Spokane, Wash.....	June 30, 1909	390,734	13,836	28.40	13	119,425	1,860	64.21	13	2.26	11
33	Albany, N. Y.....	Dec. 31, 1908	283,150	11,331	25.13	10	60,669	1,151	52.80	10	2.10	10

GROUP III.—CITIES HAVING A POPULATION OF 50,000 TO 100,000 IN 1910.

35	Trenton, N. J.....	June 30, 1909	\$310,379	12,058	\$25.70	21	\$55,653	808	\$68.87	24	2.68	19
37	Reading, Pa.....	Feb. 16, 1909	219,690	10,208	21.60	14	44,706	904	49.47	15	2.29	16
38	Camden, N. J.....	June 30, 1909	352,139	13,506	26.10	23	46,921	547	83.98	25	3.22	24
39	Dallas, Tex.....	Apr. 30, 1909	169,892	10,908	15.60	2	52,289	994	52.56	19	3.37	26
41	Wilmington, Del.....	June 30, 1909	185,346	9,879	18.76	6	38,994	1,087	35.84	3	1.91	7
42	Des Moines, Iowa.....	.....do.....	399,749	14,050	28.30	24	95,656	1,857	51.51	18	1.96	8
43	Lawrence, Mass.....	Dec. 31, 1908	226,178	7,515	30.06	27	36,556	651	56.20	22	1.87	6
44	Tacoma, Wash.....	June 30, 1909	257,829	10,161	25.20	20	81,634	1,791	45.60	11	1.80	3
45	Kansas City, Kans.....	.....do.....	173,902	9,620	18.05	4	60,779	1,186	51.40	17	2.86	23
48	Utica, N. Y.....	Dec. 31, 1908	207,405	9,357	22.15	17	38,737	763	50.78	16	2.30	17
49	Elizabeth, N. J.....	June 30, 1909	160,681	8,156	19.70	8	26,936	602	44.76	10	2.27	14
50	Schenectady, N. Y.....	Dec. 31, 1908	191,313	9,103	21.02	11	35,987	764	47.11	12	2.24	13
51	Hoboken, N. J.....	June 30, 1909	287,446	9,864	29.15	26	38,630	396	97.55	27	3.35	25
52	Manchester, N. H.....	Dec. 31, 1908	125,530	5,813	21.62	15	23,250	578	40.23	4	1.86	5
55	Wilkes-Barre, Pa.....	June 7, 1909	176,965	9,243	19.16	7	28,944	1,136	25.47	1	1.33	1
56	Peoria, Ill.....	June 30, 1909	218,850	8,402	26.05	22	29,807	617	48.26	13	1.85	4
57	Erie, Pa.....	June 7, 1909	150,859	7,252	20.82	10	38,265	874	43.79	7	2.11	11
58	Savannah, Ga.....	Dec. 31, 1908	98,394	7,181	13.71	1	17,967	444	40.46	5	2.95	23
59	Oklahoma, Okla.....	June 30, 1909	140,003	7,583	18.47	5	35,935	856	42.00	6	2.28	15
60	Harrisburg, Pa.....	June 1, 1909	183,864	9,148	20.10	9	49,928	902	55.35	21	2.76	20

TABLE 32.—Showing average annual cost per pupil, based on enrollment, of instruction, operation, and maintenance of elementary schools, including kindergartens, and of secondary schools and the relation of these costs to each other, in a selected list of cities, 1909—Continued.

EXPENSES OF CITY SCHOOL SYSTEMS.

GROUP III.—CITIES HAVING A POPULATION OF 50,000 TO 100,000 IN 1910—Continued.

		Fiscal year ended—	Elementary schools.				Secondary schools.				Cost per pupil—Ratio of elementary schools to secondary schools.	Rank.
			Expenses.	Enroll-ment.	Cost per pupil.	Rank, cost per pupil.	Expenses.	Enroll-ment.	Cost per pupil.	Rank, cost per pupil.		
63	East St. Louis, Ill.	June 30, 1909	\$150,000	87,017	\$21.28	13	\$21,315	490	\$49.60	14	2.32	18
67	Bayonne, N. J.	do	245,017	8,367	29.28	26	24,126	383	62.20	20	2.13	12
68	Johnstown, Pa.	June 7, 1909	141,030	6,367	22.14	16	32,267	524	61.58	23	2.79	21
69	Passaic, N. J.	June 30, 1909	161,284	7,244	22.28	19	31,406	349	90.02	26	4.04	27
70	Wichita, Kans.	do	108,014	6,660	16.25	3	20,900	757	27.70	2	1.71	2
71	Covington, Ky.	do	107,143	4,796	22.32	18	15,809	355	44.57	9	2.00	9
72	Allentown, Pa.	do	125,997	5,917	21.30	12	20,914	475	44.04	x	2.07	10

GROUP IV.—CITIES HAVING A POPULATION OF 30,000 TO 50,000 IN 1910.

76	Sioux City, Iowa.	June 30, 1909	\$160,777	7,035	\$22.84	12	\$28,762	690	\$41.72	10	1.83	6
77	Lancaster, Pa.	June 1, 1909	100,269	5,381	18.65	7	26,083	602	43.34	11	2.33	9
78	Atlantic City, N. J.	Dec. 31, 1908	146,379	6,560	22.33	11	29,607	450	65.80	16	2.95	14
79	Little Rock, Ark.	June 30, 1909	94,655	5,626	16.83	4	19,026	732	25.95	1	1.54	2
81	Bay City, Mich.	do	122,539	5,671	21.62	9	35,533	702	46.63	14	2.16	8
82	York, Pa.	June 10, 1909	112,489	6,060	18.55	5	21,470	609	35.27	4	1.90	7
85	Malden, Mass.	Dec. 31, 1908	159,706	6,603	24.20	17	54,028	920	58.73	15	2.43	10
86	Pueblo, Colo.	June 30, 1909	138,833	7,238	19.17	8	34,726	517	67.19	17	3.50	15
87	Haverhill, Mass.	Dec. 31, 1908	135,472	5,317	26.12	16	30,105	669	44.95	12	1.72	4
88	New Britain, Conn.	Mar. 31, 1909	97,356	6,546	14.86	2	20,801	557	37.37	6	2.53	12
89	Topeka, Kans.	June 30, 1909	150,229	5,929	25.33	15	43,534	1,216	35.70	5	1.41	1
92	Chester, Pa.	June 7, 1909	99,984	4,510	22.19	10	14,098	364	38.75	7	1.74	5
93	Dubuque, Iowa.	June 30, 1909	89,376	3,550	26.20	14	20,882	533	39.18	8	1.56	3
95	Racine, Wis.	Dec. 31, 1908	106,778	5,686	18.60	6	26,060	561	46.46	13	2.50	11
96	Knoxville, Tenn.	June 23, 1909	60,519	5,450	11.12	1	13,580	461	29.48	3	2.66	13
97	Newcastle, Pa.	June 4, 1909	116,173	4,997	23.22	13	20,799	520	39.98	9	1.72	4
102	Joplin, Mo.	June 30, 1909	96,816	5,979	16.20	3	16,463	537	27.96	2	1.72	4



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AGRICULTURAL EDUCATION IN SECONDARY SCHOOLS

PAPERS READ AT THE SECOND ANNUAL MEET-
ING OF THE AMERICAN ASSOCIATION FOR THE
ADVANCEMENT OF AGRICULTURAL TEACHING
COLUMBUS, OHIO, NOVEMBER 14, 1911

WASHINGTON
GOVERNMENT PRINTING OFFICE
1912

TABLE 31.—Showing ratio of expenses of schools to total city expenses and to expenses of police department and expenses of schools per capita of population in 103 cities of 30,000 population and over, 1909—Continued.

GROUP III.—CITIES HAVING A POPULATION OF 50,000 TO 100,000 IN 1910—Continued.

	Cities.	Expenses of schools.	Total city expenses.	Ratio of school expenses to total city expenses.	Rank.	Expenses of police department.	Ratio of school expenses to expenses of police department.	Rank.	Population 1908. [Revised estimate.]	Expenses of schools per capita of population.	Rank.
46	St. Joseph, Mo.....	\$269,754	\$695,010	.388	23	\$89,915	3.00	17	77,403	\$3.43	17
47	Troy, N. Y.....	330,346	1,111,899	.298	8	131,821	2.50	11	76,004	4.31	27
48	Utica, N. Y.....	268,696	859,380	.313	10	62,914	4.27	32	70,775	3.82	24
49	Elizabeth, N. J.....	212,509	612,447	.347	18	84,685	2.39	7	68,543	3.10	10
50	Schenestady, N. Y.....	242,238	774,670	.312	9	89,937	2.69	13	67,205	3.61	21
51	Hoboken, N. J.....	360,404	895,041	.403	26	164,438	2.22	5	68,455	3.80	23
52	Manchester, N. H.....	157,726	649,375	.243	4	57,707	2.73	14	68,149	2.32	5
53	Evansville, Ind.....	232,761	531,962	.438	33	67,336	3.46	22	67,721	3.44	15
54	Norfolk, Va.....	144,720	764,300	.192	2	122,133	1.19	4	65,394	2.21	4
55	Wilkes-Barre, Pa.....	221,600	548,227	.404	25	58,174	3.80	28	64,184	3.45	16
56	Peoria, Ill.....	270,458	816,153	.331	12	107,355	2.53	12	61,691	4.39	29
57	Erle, Pa.....	217,215	531,471	.409	27	54,163	4.00	29	63,905	3.40	14
58	Savannah, Ga.....	124,860	512,654	.244	5	119,562	1.04	1	64,338	1.94	3
59	Oklahoma, Okla.....	189,447	415,147	.456	36	26,186	7.23	41	44,779	4.23	26
60	Harrisburg, Pa.....	253,430	570,699	.444	34	48,456	5.23	38	59,863	4.23	26
61	Charleston, S. C.....	108,359	584,649	.177	1	95,682	1.08	3	58,257	1.78	2
62	Portland, Me.....	257,563	909,186	.283	6	90,683	2.84	16	56,970	4.52	31
63	East St. Louis, Ill.....	187,189	542,195	.346	17	77,254	2.42	9	52,751	3.55	20
64	Holyoke, Mass.....	248,410	745,250	.333	13	69,354	3.58	23	54,701	4.54	32
65	Jacksonville, Fla.....	85,088	426,583	.199	3	80,509	1.06	2	48,933	1.74	1
66	Brockton, Mass.....	263,474	705,165	.360	19	67,715	3.75	25	53,443	4.75	34
67	Bayonne, N. J.....	287,089	620,880	.462	37	76,122	3.77	26	50,436	5.70	38
68	Johnstown, Pa.....	183,061	374,439	.490	41	37,086	4.94	35	51,948	3.53	19
69	Passaic, N. J.....	209,331	444,796	.470	39	28,050	7.45	42	48,259	4.33	28
70	Wichita, Kans.....	138,570	337,549	.410	28	28,975	4.78	33	44,642	3.11	11
71	Covington, Ky.....	134,819	390,680	.345	16	55,060	2.45	10	52,095	2.59	6
72	Allentown, Pa.....	162,076	340,929	.475	40	26,068	6.21	40	49,271	3.30	12
73	Springfield, Ill.....	185,208	505,274	.366	21	50,894	3.64	24	47,471	3.90	25
74	Saginaw, Mich.....	241,044	533,814	.451	35	47,528	5.07	37	49,265	4.89	35
75	Canton, Ohio.....	157,771	374,267	.422	32	31,566	4.99	36	47,453	3.32	13

EXPENSES OF CITY SCHOOL SYSTEMS.

GROUP IV.—CITIES HAVING A POPULATION OF 30,000 TO 50,000 IN 1910.

76	Sioux City, Iowa.....	\$201,948	\$422,008	0.478	24	\$37,573	5.37	20	45,391	\$4.45	23
77	Lancaster, Pa.....	137,387	323,539	.424	20	29,074	4.72	16	46,131	2.96	7
78	Atlantic City, N. J.....	184,872	868,261	.213	3	107,485	1.73	2	42,858	4.31	19
79	Little Rock, Ark.....	128,597	335,139	.384	16	43,093	1.98	3	43,589	2.95	6
80	Rockford, Ill.....	163,741	345,805	.478	23	29,550	5.53	22	42,913	3.32	9
81	Bay City, Mich.....	168,253	385,289	.437	21	31,247	5.39	21	43,721	3.85	16
82	York, Pa.....	146,104	287,118	.509	26	23,850	6.11	25	42,591	3.43	11
83	Sacramento, Cal.....	220,688	642,720	.343	10	43,927	5.03	19	41,768	5.28	26
84	Chattanooga, Tenn.....	86,702	428,824	.202	2	62,576	1.39	1	42,525	2.04	1
85	Malden, Mass.....	226,888	589,740	.385	17	46,570	4.87	17	41,996	5.40	27
86	Pueblo, Colo.....	187,326	550,520	.304	5	49,983	3.75	12	41,405	4.53	24
87	Haverhill, Mass.....	184,473	548,459	.337	7	42,376	4.35	15	41,738	4.43	22
88	New Britain, Conn.....	143,210	389,050	.368	12	33,345	4.30	14	40,931	3.50	13
89	Topeka, Kans.....	201,880	381,809	.530	27	25,120	8.04	28	43,357	4.65	25
90	Davenport, Iowa.....	226,280	597,955	.380	15	37,303	6.07	24	41,886	5.40	27
91	Wheeling, W. Va.....	153,298	394,663	.388	18	47,877	3.20	8	41,116	3.73	15
92	Chester, Pa.....	122,064	271,574	.449	22	29,767	4.10	13	37,673	3.24	8
93	Dubuque, Iowa.....	116,346	339,695	.342	8	33,728	3.45	10	39,717	2.93	5
94	Woonsocket, R. I.....	97,801	334,744	.292	4	33,917	2.89	6	35,845	2.73	4
95	Racine, Wis.....	140,916	337,999	.417	19	17,756	7.92	27	35,804	3.94	17
96	Knoxville, Tenn.....	79,215	316,925	.150	1	38,023	2.08	4	35,641	2.23	2
97	New Castle, Pa.....	146,085	296,778	.492	25	22,911	6.33	26	34,867	4.19	18
98	Joliet, Ill.....	117,329	339,880	.345	11	36,475	3.21	9	33,659	3.48	12
99	Auburn, N. Y.....	123,028	381,455	.323	6	33,771	3.69	11	33,844	3.64	14
100	Taunton, Mass.....	142,618	415,829	.343	9	47,265	3.02	7	33,014	4.32	20
101	Oshkosh, Wis.....	107,605	288,184	.374	14	17,901	6.01	23	32,105	3.35	10
102	Joplin, Mo.....	120,347	226,893	.530	28	24,628	4.89	18	27,278	4.41	21
103	Newport, Ky.....	80,409	216,928	.371	13	33,873	2.37	5	29,926	2.69	3

TABLE 32.—Showing average annual cost per pupil, based on enrollment, of instruction, operation, and maintenance of elementary schools, including kindergartens, and of secondary schools and the relation of these costs to each other, in a selected list of cities, 1909.

	Fiscal year ended—	Elementary schools.				Secondary schools.				Cost per pupil—Ratio of elementary schools to secondary schools.	Rank.
		Expenses.	Enroll-ment.	Cost per pupil.	Rank, cost per pupil.	Expenses.	Enroll-ment.	Cost per pupil.	Rank, cost per pupil.		
Group I: Median.....	\$28.54	5+	.....	.....	\$64.39	5+	2.27	5+
Middle 50 per cents.....	24.34 to 27.65	4 to 7	.....	.....	57.99 to 71.32	4 to 7	1.985 to 2.65	3 to 7+
Group II: Median.....	24.29	8	.....	.....	48.50	8	1.84	8
Middle 50 per cents.....	21.745 to 25.775	5 to 11	.....	.....	40.405 to 53.935	5 to 11	1.71 to 2.34	6 to 12+
Group III: Median.....	21.60	14	.....	.....	49.56	14	2.27	14
Middle 50 per cents.....	19.43 to 25.50	8 to 20	.....	.....	43.875 to 54.91	8 to 20	1.89 to 2.775	8 to 20+
Group IV: Median.....	21.71	9	.....	.....	39.98	9	1.90	7
Middle 50 per cents.....	18.55 to 23.22	5 to 13	.....	.....	35.70 to 46.46	5 to 13	1.72 to 2.465	4 to 10+

GROUP I.—CITIES HAVING A POPULATION OF 300,000 AND OVER IN 1910.

1	Chicago, Ill.....	June 30, 1909	\$7,360,704	275,062	\$26.77	6	\$1,073,247	16,616	\$64.65	6	2.41	7
2	St. Louis, Mo.....	.....do.....	1,906,210	82,324	23.17	3	407,571	4,569	89.20	10	3.85	9
4	Baltimore, Md.....	Dec. 31, 1908	1,429,100	76,416	18.71	1	259,859	3,569	72.82	8	3.90	10
5	Detroit, Mich.....	June 30, 1909	1,299,280	49,394	26.31	5	297,035	5,189	57.24	3	2.18	4
6	Buffalo, N. Y.....	.....do.....	1,299,344	57,662	22.51	2	198,330	4,362	45.50	1	2.02	3
7	San Francisco, Cal.....	.....do.....	1,332,016	39,717	33.57	10	206,526	3,224	64.13	5	1.91	2
9	Newark, N. J.....	.....do.....	1,516,593	53,844	28.19	8	155,729	1,912	81.65	9	2.89	8
11	Washington, D. C.....	.....do.....	1,534,037	48,968	31.32	9	386,116	5,525	69.82	7	2.23	5
12	Los Angeles, Cal.....	.....do.....	969,739	38,234	25.40	4	256,105	4,356	58.75	4	2.31	6
13	Minneapolis, Minn.....	Dec. 31, 1908	1,091,649	40,326	27.11	7	251,518	5,311	47.38	2	1.75	1

GROUP II.—CITIES HAVING A POPULATION OF 100,000 TO 300,000 IN 1910.

16	St. Paul, Minn.....	Dec. 31, 1908	\$596,202	25,761	\$23.13	6	\$141,532	2,525	\$55.92	12	2.42	12
17	Portland, Oreg.....	do.....	537,444	21,667	24.37	8	82,964	2,028	40.90	5	1.68	3
20	Oakland, Cal.....	June 30, 1909	462,936	14,933	31.10	15	98,017	1,847	52.95	11	1.70	4
21	Syracuse, N. Y.....	Dec. 31, 1908	420,148	19,968	21.00	4	106,611	2,568	41.51	6	1.98	9
23	Birmingham, Ala.....	June 30, 1909	114,305	8,404	13.62	1	34,448	1,029	33.48	3	2.47	13
24	Memphis, Tenn.....	do.....	246,388	13,192	18.70	3	22,909	884	26.89	2	1.39	1
25	Scranton, Pa.....	do.....	305,503	17,038	23.30	9	101,760	1,391	73.30	15	3.15	15
26	Paterson, N. J.....	do.....	426,816	17,752	23.99	7	61,763	1,549	39.91	4	1.66	2
27	Omaha, Nebr.....	Dec. 31, 1908	417,674	16,580	25.20	11	93,587	2,051	45.72	7	1.81	7
28	Grand Rapids, Mich.....	June 30, 1909	410,329	13,923	29.49	14	92,513	1,811	51.15	9	1.73	6
29	Nashville, Tenn.....	Dec. 31, 1908	230,939	15,296	15.12	2	26,909	1,041	25.91	1	1.72	5
30	Lowell, Mass.....	do.....	321,391	12,210	26.35	12	58,748	1,214	48.39	8	1.84	8
31	Cambridge, Mass.....	Mar. 31, 1909	346,102	15,399	22.49	5	120,712	1,736	69.40	14	3.08	14
32	Spokane, Wash.....	June 30, 1909	390,734	13,836	28.40	13	119,425	1,860	64.21	13	2.26	11
33	Albany, N. Y.....	Dec. 31, 1908	283,150	11,331	25.13	10	60,669	1,151	52.80	10	2.10	10

GROUP III.—CITIES HAVING A POPULATION OF 50,000 TO 100,000 IN 1910.

35	Trenton, N. J.....	June 30, 1909	\$310,379	12,068	\$25.70	21	\$55,653	808	\$68.87	24	2.68	19
37	Reading, Pa.....	Feb. 16, 1909	219,690	10,208	21.60	14	44,708	904	49.47	15	2.29	16
38	Camden, N. J.....	June 30, 1909	352,139	13,505	26.10	23	45,921	547	83.98	25	3.22	24
39	Dallas, Tex.....	Apr. 30, 1909	169,892	10,908	15.60	2	52,289	994	52.56	19	3.37	26
41	Wilmington, Del.....	June 30, 1909	185,346	9,879	18.76	6	38,994	1,067	36.84	3	1.91	7
42	Des Moines, Iowa.....	do.....	309,749	14,060	26.30	24	96,656	1,857	51.51	18	1.96	8
43	Lawrence, Mass.....	Dec. 31, 1908	226,178	7,515	30.08	27	36,556	651	56.20	22	1.87	6
44	Tacoma, Wash.....	June 30, 1909	257,829	10,161	25.30	20	81,634	1,791	45.60	11	1.80	3
45	Kansas City, Kans.....	do.....	173,902	9,620	18.05	4	60,779	1,186	51.40	17	2.86	22
48	Utica, N. Y.....	Dec. 31, 1908	207,405	9,357	22.15	17	38,737	763	50.78	16	2.30	17
49	Elizabeth, N. J.....	June 30, 1909	160,681	8,156	19.70	8	26,936	602	44.76	10	2.27	14
50	Schenectady, N. Y.....	Dec. 31, 1908	191,313	9,103	21.02	11	35,987	764	47.11	12	2.24	13
51	Hoboken, N. J.....	June 30, 1909	287,446	9,864	29.15	25	38,630	396	97.55	27	3.35	25
52	Manchester, N. H.....	Dec. 31, 1908	125,530	5,813	21.62	15	23,250	578	40.23	4	1.86	5
55	Wilkes-Barre, Pa.....	June 7, 1909	176,965	9,243	19.16	7	28,944	1,136	26.47	1	1.33	1
56	Peoria, Ill.....	June 30, 1909	218,850	8,402	26.05	22	29,807	617	48.26	13	1.85	4
57	Erie, Pa.....	June 7, 1909	150,859	7,252	20.82	10	38,265	874	43.79	7	2.11	11
58	Savannah, Ga.....	Dec. 31, 1908	98,394	7,181	13.71	1	17,957	444	40.46	5	2.95	23
59	Oklahoma, Okla.....	June 30, 1909	140,003	7,583	18.47	5	35,935	856	42.00	6	2.28	15
60	Harrisburg, Pa.....	June 1, 1909	183,864	9,148	20.10	9	49,928	902	55.36	21	2.76	20

AGRICULTURAL EDUCATION IN SECONDARY SCHOOLS.

PAPERS READ AT THE SECOND ANNUAL MEETING OF THE AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE, COLUMBUS, OHIO, NOVEMBER 14, 1911.

I. ESSENTIALS IN A STATE SYSTEM OF AGRICULTURAL EDUCATION.

By F. W. HOWE,

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The lapse of 54 years since the founding of the first American agricultural college should have given time enough for the formulation of some definite, integrated scheme of agricultural education that could merit and enlist the intelligent support of the American people. It has taken the larger fraction of that period, however, to establish the work of the agricultural colleges in general public estimation, and some, even among the leaders, have been satisfied with this measure of accomplishment, and have been inclined to regard it as the consummation of the development of an ideal system of agricultural education.

Certain of them, however, saw far beyond this—for example, read President James's recent tribute to the far-seeing statesmanship of Prof. J. B. Turner—yet some of the lesser folk, of the common people, have been the ones to encourage and develop the demand for something broader than was first contemplated. As with the older institutions of traditional type, the seed planted by the colleges of agriculture has fruited in the far-spread sentiment that education for efficiency is the right of all the people. And the recognized dependence of the national welfare upon agricultural prosperity has reenforced the demand that special educational provision shall be made for instruction in agriculture.

So we have seen numerous significant, if not scientific, attempts to bring this to pass. In certain States we have seen the teaching of agriculture required by law in all the public schools, even before any teaching standards had been erected or any requirement made that teachers should be examined in the subject. We have seen special schools of agriculture spring full fledged from the fiat of

legislatures, without regard to the relation of these establishments to the colleges or to the general public schools. We have seen private schools and State normal schools offering agricultural courses in the same independent fashion. We have seen congressional district, and judicial district, and indeterminate district schemes of distribution of such schools. We have seen abandoned county courthouses and old academy buildings take on a new life as the home of these promising new schools; and we have seen all sorts and degrees of State-aided schemes brought forward for their support.

We may consider these sporadic developments unpedagogical, irrational, or even as symptoms of sheer political pull or demagogic ambition; but we must admit that their ultimate success depends upon the fact that the people of the several States have set their minds on having an agricultural education that shall be really democratic, in the sense that it is open to every boy and girl who wants it, regardless of the distance of his home from the State agricultural college. Just as the agricultural colleges have fought their hardest battle to overcome the inertia and ignorance of farmers themselves, in like manner those who are interested in the real education of these farmers' children may have to resist and overcome influences that would now restrict the opportunities of education. The very excellence of the teaching of the agricultural colleges has developed the demand for more of this type of instruction than can be given effectively in centralized institutions. The colleges may yet "head up" this movement for broader educational opportunity, but they can not "head off" the movement. And if this trend has not yet shaped itself definitely within the lines of a pedagogic and rational system, at least the development has gone far enough to supply the factors entering into the outline of such a system.

If these observations have served a useful purpose in introducing my theme, I may be justified now in plunging into it at once, and my first proposition is this:

The State scheme of education in agriculture should be definitely and intimately related to the State's general system of education.

It may seem easy now to assent to that proposition, but it was only five years ago that the writer found occasion to say in a published article that the usual agricultural college stood as far apart from the recognized system of public education as do the private colleges or the State reform schools.

If, however, we are now agreed that instruction in agriculture is a legitimate and commendable concern of general public education, certain corollaries which naturally follow from the fundamental proposition deserve special statement, as follows:

1. The State agricultural college should be recognized as an important and necessary part of the general educational mechanism of the State.
2. Preparation for entrance upon the courses offered in the agricultural college should be a recognized function of the public high school.
3. The high-school courses in agriculture should present a broadly cultural as well as specifically vocational character.
4. These courses should be projected upon a definite plan of State aid and State supervision.
5. General but none the less distinctive teaching of agriculture in the seventh and eighth grades should precede and prepare for these courses.

Space will permit but the briefest comment as to the significance and validity of the foregoing statements, considered in the direct order.

(1) If the State agricultural college is not an organic part of the State university—and some of the oldest and best of them did not so originate—at least it should be recognized that the best work of these schools is of tertiary rather than merely of secondary grade and that it stands on equal footing with the engineering, scientific, or other professional departments of a well-balanced university system.

It is worth while to call attention to the fact that the original concept of the land-grant college was that of an industrial university. The isolated colleges of this type that have developed harmonious departments of literature, science, arts, history, economics, and language, as well as engineering, forestry, home economics, and agriculture, are still within the scope of the first intention. Though generally so called, these institutions are not exclusively colleges of agriculture, a point that universities as well as the common people do well to remember.

(2) If it is, then, rational and commendable for the public high schools to offer courses preparatory to colleges of law, medicine, science, education, and the liberal arts, it is obviously of equal sanity of thought and procedure that they should also provide courses that lead to the practical arts, either in a higher school or in real vocational life. The obligation to do this is the more urgent in view of the relatively small number of high-school graduates who enter the more learned callings.

(3) But if the high school is to make such offerings as a part of its general educative function, it must bring them into some articulate relation with the material of teaching common to all the other courses. Stated differently, it is a violation of sound pedagogic

principles to "segregate" agricultural students in studies that ought to be pursued in common with other students.

The high-school student can no longer master all the subjects embraced in the modern curriculum; and even the weakest high school should not oblige or expect each of its students to cover the subjects studied by every other student in order to graduate. Furthermore, the agricultural student needs association and coeducation with future citizens who are to devote themselves to other occupations than farming. This assures the safest condition for developing sound ideals of civic responsibilities and of personal culture. In truth, the education that most of us must get for vocation holds in itself the surest, most nearly permanent cultural possibilities. Culture is the spring whose current turns the mill of daily life, while at the same time preserving the beauty of the landscape which life surveys through its windows and into which it walks at eventide.

(4) But a high-school course in agriculture that is both broadly cultural and vocationally adequate can not be properly sustained "in the present state of the art" without assistance from the State as a whole. Efficient teachers of agriculture cost more than efficient teachers of Latin or algebra, even though not as yet so well trained in the theory of teaching their specialty. The new subjects, slow in coming to their proper place in the modern curriculum, must now have unusual assistance in promptly developing their important functions. And the sufficient justification for special State aid in money and supervision lies in the fact that the productive skill and habit developed in the agricultural courses accrue to the advantage of the whole State in a much more direct and traceable way than is shown by the training for any of the older professions.

As to the best way through which financial aid may come to the schools and as to the best proportion of general to technical or vocational studies in the course, local conditions and opinions will vary. So far as any generalization, based upon the actual practice in respect to these points, can yet be made, it would appear that the more eastern States in this country show a tendency to exact a larger proportion of the student's time for technical studies, while conferring a relatively smaller amount of financial aid from the State treasury. There appears also to be a tendency in the Middle Western States to limit the number of schools enjoying this benefit much more definitely than in the Eastern States. Thus, upon the first point mentioned, the report of the recent Illinois Educational Commission recommends that only one-fourth of the course be given to agriculture or other vocational subjects. Missouri and Nebraska and probably a number of other Western States require the teaching of agriculture with State aid through only one or two years of the high-school course.

In contrast with these, New York requires five-twelfths of the time to be devoted to vocational work through four years, and Massachusetts requires practically two-thirds of the time. The latter State also insists that one-fourth of the time given to agriculture shall be devoted to practical work done at the home under direction of the special teacher. No Massachusetts high school can receive State aid and approval for its agricultural course except by carrying out this requirement, which may be regarded as a limiting factor in determining the number of schools that will elect to take advantage of it, for it is intended that "when conflict is unavoidable, or when continuous application for a number of days to his productive farming projects becomes necessary, all else must yield to the student's agricultural instruction, no matter what the cost for the time being to his other studies."

Considering now the second point of comparison between eastern and western schools, Minnesota definitely limits the number of schools receiving State aid under the Putnam law to 10 additions to the list in any biennium. Under this provision 30 schools now receive State aid to a maximum of \$2,500 annually under the Putnam act, and 55 schools receive \$1,000 each under the Benson-Lee act. A somewhat similar limitation prevails in Louisiana and Virginia, which are neither Western nor Eastern States in the usual implication of those terms. North Dakota limits State aid, amounting to a maximum of \$2,500 annually, to five high schools the first year, and to five additional schools in any subsequent period of two years.

Turning again to the Eastern States, New York offers but \$500 annually to schools employing one vocational teacher of "agriculture, mechanic arts, and home making," though this proposition is wide open to every high school in the State that can enlist 25 approved students in the course. Massachusetts makes no limitation upon the number of schools, except by the curricular provisions previously noted, and by fixing the amount of its total appropriation for vocational instruction at \$10,000, a sum which is available for paying two-thirds of the salaries of instructors in agricultural departments of high schools. Maine gives State aid in the proportion of two-thirds of the local expenditures for teaching agriculture, though the absolute amount paid must not exceed \$500 annually to any school.

This hasty survey would thus seem to justify the statement that in the Eastern States generally, where agriculture is not commonly considered so dominant an industrial interest as in the West, the proportion of school time exacted for the study of agriculture is greater than in the Western States, while the amount of State aid offered is notably less; and further, that in the Eastern States there is no definite numerical limitation of the number of schools entitled to State aid, while this limitation appears to be typical of the western plan.

Possibly this rather unexpected conclusion from the comparison made would break down under closer analysis; but it would seem at least to provoke further investigation as to the historic, educational, social, and economic factors involved in an explanation of the two situations compared.

(5) In further comment upon the suggestion that high-school courses should be preceded by agricultural teaching in the lower grades, it may be said that this proposition is now generally conceded. My own point is that this teaching ought to be recognized as an essential step in the practical development of a standard system of agricultural education. It has been practically admitted for a number of years now that the up-to-date high school, at least in the more rural sections, ought to give a one-year general course in textbook agriculture for the sake of its cultural and informational value, if for no other reasons.

So much surely ought to be done; but no high school that means to live up to its full duty in teaching agriculture from the vocational viewpoint can spare the time in a four-year course for a mere general or academic study of agriculture. The logical place for such a course is in the seventh and eighth grades, when the pupil is naturally eager to take up a new textbook on a new theme, enlivened perhaps by occasional demonstrations and observation trips to real farms, and where the generalized, descriptive study of the business of agriculture and its relations to other great world industries will constitute an apperceptual background for the more specialized instruction that awaits him in the high-school course.

To defer this general but elemental study of agriculture to the later years of the course contravenes every consideration of true pedagogy, and contributes much to the lamentable tendency of pupils to "eliminate" themselves from the public school before they have had a fair chance to appreciate the meaning of real high-school work. Much might be said, also, upon the value of this elementary study of agriculture, considered as a preparation for high-school science study.

The development of my theme has thus far pertained chiefly to the general public high schools as the educational unit that needs to be considered next after the agricultural college in the fashioning of a State system of agricultural education. There remain for brief attention certain *scholia*, more or less important, that belong to other phases of the subject. These may now be stated.

(a) To make agricultural teaching effective, there must be special provision for the adequate training of teachers.

Possibly this is a matter of less consequence in relation to college instruction, where it may be assumed that persistent students will gain information in spite of the poor methods of presentation that are all too common, but it has imperative importance in the high-

school field and lower. I have no time or disposition to argue this. There are no "born" teachers of agriculture, or any other subject, who need not to be born again through the spirit of true, conscious insight and understanding of the laws of teaching. If it were not so, then we have foolishly spent millions of money in the support of normal-school instruction in the Nation. But not even a referendum vote to abolish all normal schools could invalidate the fact of the need of special training for the art of teaching. Agricultural instruction of any grade can not afford to ignore the requirements which that fact imposes. There was need of the organization of the American Association for the Advancement of Agricultural Teaching.

The State normal schools themselves, to which we naturally look for this training, are beginning to offer it. The quality of the training will improve with larger experience and with adequate technical information in the science and business of agriculture. The agricultural colleges constitute another source from which this instruction should be expected, though they have been slow, if not reluctant, to provide it. The special secondary schools of agriculture that have been established in many States should also do much to prepare experienced public-school teachers to give instruction in the new subject. The general public high school that offers both agricultural and teachers' training courses can likewise do much to better the instruction in lower schools, especially in the rural districts.

The remark which seems important in this connection is that no one State educational institution can supply the training needed to meet pressing demands of the present and the future, and no single institution should attempt to arrogate to itself such a prerogative. The land-grant colleges have no monopoly of the instrumentalities of agricultural education. It is easily conceivable that in many States the wholesome rivalry of an independent institution of collegiate rank that took some pains to secure teachers who should know teaching as well as agriculture, and whose work must depend for support upon its intrinsic excellence rather than upon fixed appropriations from the State treasury—it is possible, I say, that the presence and influence of such a school might be a distinct blessing to the work of certain State institutions. The time is at hand when we should expect large endowments from private sources to complement the service of State and national establishments for promoting education in agriculture, just as we have seen the general education system of State and Nation preceded, and then followed, by private foundations for educational purposes. The disposition to put all responsibility for educational betterment upon the resources of the public treasury is no certain evidence of popular appreciation of educational requirements. The real advances in all national development come from special or individual initiative.

(b) *To improve general agricultural teaching in the State there ought to be a State association of all agricultural teachers and supervisors.*

This State association would bring to its members the conceded advantages of like cooperation in other lines of teaching. The educational powers that be often manifest a tendency to discourage the formation of new organizations. It is, however, distinctly a matter for the beneficiaries to settle for themselves.

(c) *A State organ of publicity and professional improvement is a proper outgrowth of such an organization.*

It should serve as a clearing house of information and suggestion for all grades of agricultural teaching without advertising the special merits of any particular school or person.

(d) *Partly outside the immediate local functions of the several schools, but intimately and logically connected with them, is the field of certain lines of so-called extension instruction.*

These need not be now specified, but it is pertinent to say that here again the field does not belong to any one institution or agency. The local high school may offer such extension work in a series of winter monthly meetings for farmers or otherwise carry on this instruction, perhaps even more effectively than it could be done by a remote institution. Of course the local school should utilize to the utmost any assistance it can secure from general agencies for agricultural betterment—the State farmers' institute service, the State grange, the State departments or boards of agriculture and of education, the faculty of the State college of agriculture and of other teaching institutions, and the staff of the experiment station—but it should pre-eminently develop the interest and abilities of the farmers of its own community. The real success of agricultural teaching within and without the school building will be measured by the extent to which the instruction is adapted to local conditions and possibilities and gets itself realized in the essential betterment of practice on the home farm.

(e) *In addition to furnishing these intimate and personal forms of extension instruction, an ideal system of agricultural education will also provide some systematic type of correspondence teaching in agriculture.*

This is a field of possibility that is yet by no means fully worked, and its special virtue consists in the emphasis which it places on the conception of education as a lifelong process, never completed at any age. It is a form of service that can be particularly helpful to the experienced teacher who knows as yet but little scientific agriculture and to the agricultural graduate who knows as yet but little of the science and the art of teaching.

(f) *To give unity of purpose in the interaction of all these agencies for agricultural education, there ought to be an annual State conference.*

This conference should bring together perhaps not the actual teachers, who ought to have their own special meetings, but the leaders of the State who form public opinion in developing the trunk lines of State progress. Possibly there should be a permanent State commission on agricultural education that should serve to represent and harmonize the various interests concerned in the agricultural and educational development of the State's resources. The influence of some such agency is probably the only efficient safeguard against ill-considered legislative action on these matters.

(g) In this essay to set forth the outlines of a State system of agricultural education, I should include a final proposition: *Additional Federal aid should still be given to the several States in promoting the efficiency of agricultural education.*

Neither education nor agriculture have exhausted their rightful claims upon the fostering care of the General Government. Legislation looking to these ends, frequently proposed in recent years but still deferred, is yet needed to perfect the development of a measurably complete system of agricultural education. So long as public money is still not wanting for the pageantry of war on land and sea the advocates of real national progress will be justified in continuing to press these claims to final recognition.

In the meantime, as well as afterwards, a great advantage would come to the teaching of agriculture through all grades and forms of instruction if the department of agricultural education in the Experiment Station Record could be expanded into, or be supplemented by, a national organ of representation for the important interests involved. Excellent as it is, the clearing-house function of the Office of Experiment Stations in relation to agricultural education is not adequate to the magnitude and dignity of the development which this interest has already attained. If the influence of this organization and of others of like interest be unable to bring about the establishment of such additional means of public discussion and representation, through appropriate legislation and requisite appropriations, then, as a nation-wide association of agricultural educators, we shall face the duty of devising and conducting such an organ directly through our own effort. There should be support enough to assure success to such an effort.

II. THE NEED FOR RELIABLE SCIENTIFIC DATA REGARDING SOCIAL AND ECONOMIC CONDITIONS IN RURAL COMMUNITIES.

By E. C. HIGBIE,

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The objects of this association are to promote and to increase the efficiency of agricultural teaching. The value of agricultural instruction is now seriously questioned only by those who need it most. Some ignorant, slipshod farmers, together with a small self-confident, successful contingent, are practically the only ones who see no place for the new work. President Butterfield generalizes the rural problem thus: "To maintain upon our land a class of people whose status in our society fairly represents American ideals, industrial, political, social, and ethical." Any one in touch with conditions at first hand realizes that the attainment of this purpose is a task of the greatest magnitude.

In the solution of the rural problem the first need is a clear understanding of rural conditions. This comes only after the intelligent consideration of details. My thesis is that we do not have the reliable data at hand to know fully how to proceed. If the problem were uniform the work would be easier; but every State, every county, and almost every locality has its own peculiar manifestations.

This diversity of the problem is accompanied by an equal if not greater diversity of opinion. Recently I sent out a questionnaire to try to discover just what leaders in my section of the State were thinking. I was after opinion and I got it. It is true that there was some agreement, but in certain phases the differences equaled the number answering. This is an age of opinion, sometimes sympathetic and rational, often not. It is characteristic of the day that a large per cent of the people whom we meet will talk fluently and knowingly upon rural life with a strong assurance that they could give solutions for all of its problems.

These circumstances emphasize the need of reliable scientific data, for which there are at present two or three sources. As far as it goes, the census is helpful for beginnings and for general conclusions. The report of the Country Life Commission has served a splendid purpose in directing the attention of people, in a large way, to the problem, but it is interesting to note that their recommendation of a careful survey has gone the way of many of their other conclusions. A third source of information lies in the large number of articles that have appeared in newspapers, magazines, and reports during the last four years. Most of these are general and sometimes sensational in character, but often one finds discussions and descriptions of real value.

THE NEED FOR SCIENTIFIC METHOD.

What strikes one most is that all the information which we have is long-distance and general. We have been superficial, opinionated, and unscientific long enough. Now we need facts. We have about passed through the period of publicity. Politicians, newspapers, and magazines have performed their function of calling attention to the problem. In order to make the best progress, we are in need of a new spirit in investigation. The high schools have done a real service to education in resisting uniformity. In Minnesota they are absolutely free to-day to develop courses in line with the needs of the communities, and this does not apply simply to occupational differences, but also to differing phases of work in the same occupation. One agricultural community may need a considerably different kind of instruction from its neighboring community. To determine the kind of course, to know what and how to teach, local data are necessary.

The schools in all their activities are to be the real forces for solving rural problems. Those responsible for their development must know rural conditions, and cold, wet, hard facts must be the basis upon which to build.

If the farmer is hard to investigate—and we shouldn't respect him if he were not—he is often still harder to convince; but he is vulnerable when in the face of data that are correct and to the point. The hard facts of life make him suspicious of general statements—so many times his own experience flatly contradicts the generalization. I am indebted to Prof. Andrew Boss for the following statement, which so well illustrates what I am trying to say:

Since 1902 the Minnesota Experiment Station has performed a valuable service in securing data on the cost of producing farm crops in Minnesota. The method followed has been to employ route statisticians who are stationed in the representative agricultural districts and who visit the farms daily, getting a complete record of the equipment, labor, products, and methods of operations, and the disposition of the crops. Reports are made to the central office where the data are brought together in comparative form, in this way giving a fairly good representation of conditions which apply to the whole State.

The results of the investigations bring out clearly the fact that accurate information on the economic or business side of farming is badly needed. Bad practices are followed for the simple reason that the farmers can not determine which are the paying enterprises. Minnesota Bulletin No. 117 gives the cost of producing various cereal crops and discusses different phases of the farm business. Comparison of the cost tables included shows the impossibility of making a satisfactory profit from producing low-valued crops on high-priced land, and emphasizes the importance of not only highly intensified production, but of economy in the operation of the farm.

In a study of the cost of milk production (Minnesota Bulletin No. 124), it is found that Minnesota farmers made a very small profit, if any, on their cows. To pay for the cost of feed, labor in caring for them, and interest on the investment, a cow must give

5,000 pounds or more of milk a year, and produce at least 225 to 240 pounds of butter fat. Better cows give higher profits and will replace the poorer ones, as soon as the farmers know the facts in the case. While the general practice of farmers is probably nearly correct, it is impossible to determine the profitable enterprises or methods of farming without the exact data and an analysis of the farmer's business, and the data secured through the investigations of the experiment stations are being largely used in many places as basic facts in determining farm profits.

SOME QUESTIONS FOR THE LOCAL SURVEY.

To suggest what may or should be done by men in charge of public schools let me outline a possible case. A school happens to be located in an uninteresting, commonplace part of the State. Influences are stirring which demand a redirected course. All at once a new and heavy task is placed upon the man in charge. He has read, perhaps, much that has been written about the new agriculture and its possibilities, but the best thing for him to do is to go out and get acquainted with his field. He should undertake to find out answers to the following questions:

1. How many students has he who have come direct from the farm?
2. What per cent of his graduates came direct from the farm?
3. How many have returned to the farm?
4. What effect has this upon rural leadership?
5. How many of the rural teachers in his area were trained in his school?
6. What are they teaching?
7. How much education do average farm boys and girls get?
8. Wherein does it lack in training them for their particular work?
9. What kind of homes do they live in?
10. How many hours a day and days in a year do they work at farm labor?
11. What particular advantages and disadvantages do they have?
12. What are their neighborhood pastimes?
13. Do they put thought into their labor, or is it largely routine?
14. What proportion of the farmers are tenants?
15. How many are carrying mortgages? Why?
16. What is the average size of farms?
17. What method of farming is most in evidence?
18. What kinds of books do farmers keep?
19. Are they fairly paid for their work?

I am suggesting such a survey in order to get the leaders in real touch with the problem. He will be a dullard indeed who can not see a big field opening up which will be its own cause for redirected energies.

In the case just outlined I have suggested a detailed survey to be carried out by the local superintendent of schools. Now I want to suggest a larger field with the county as the area considered.

A definite plan should be laid out with the idea of learning all the main facts. As one gets into the investigation, various lines will suggest themselves. Maps and charts should be made showing graphically drainage, cultivated areas, grain products, live stock, creameries, schoolhouses, churches, etc. One of the first studies should involve the efficiency of the school system and its relation to the problem. This should be followed with social and economic investigations. A survey of farm buildings, together with sanitary conditions in house, dairy, wells, etc., should be included. Farming methods, marketing facilities, roads, labor, organizations, should receive attention. An important phase that needs serious consideration is whether the farmer is really making a fair wage. Long hours, child labor, home products, lack of account keeping, horse labor. all complicate this particular investigation.

It will be objected that such studies will not be of sufficient value for their trouble and expense. I believe that actual touch with the problem will give a new impetus to the workers that will result in much more effective organization and adaptation to the needs. A large portion of the data can be obtained through county officers, physicians, bankers, and others in touch with the county. Still more can be obtained by visitation and inquiry. A series of afternoon and evening meetings in the schoolhouses will be mutually helpful.

I am not certain that such surveys will be carried on very extensively, but I am certain that they would be very valuable and that the agencies doing the work would begin to see the solution to some of the problems now confronting us. If we are going to be leaders in rural betterment, we have got to be in real touch with the actual work, and the prosecution of such surveys would certainly acquaint us with the field. As I see it, the whole matter merely reduces the problem to scientific, accurate statement, which means, of course, a long step toward the solution.

Briefly to summarize my proposition, if we are to get at the heart of the problem and develop effective instruction, we must realize its diversity, we must have close-range data, we must gain a sympathetic acquaintance with the men and conditions of the farm.

III. THE PROPER EQUIPMENT OF AN AGRICULTURAL HIGH SCHOOL.

By D. O. BARTO,

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The agricultural studies of such a high school as I understand we are to consider under this topic may be classified under these divisions:

1. A study of the soil.
2. A study of the plant and field-crop production.
3. A study of garden and orchard crops.
4. Studies in the breeding, feeding, and care of domestic animals.
5. A study of the principles and methods of dairying.
6. A study of farm mechanics.
7. A study of landscape architecture.

Possibly few, if any, high schools will feel at the outset that they can compass this whole field of agricultural work, but there is nothing named in this list of divisions that is not of vital importance to the business of farming. Indeed, the list of subjects that might properly be included in the agricultural training of the boy who is to be a farmer is far from complete.

Since wise management of the soil is fundamental to every form of successful agriculture, I would place special emphasis on the work of this division of the course to the end that those who till the soil shall understand its physical and (to some extent) its chemical composition, and shall know how and why soils differ from each other, as well as the way in which these soils are classified and named. They should be taught the important characteristics of these soils and the best methods of handling them to secure the most satisfactory results in growing crops.

—This leads up to the immensely interesting and important studies of moisture relations of the soil and the means of controlling them; aeration of the soil, how it is secured and why it is necessary; and soil temperature, and what the farmer may do to influence this important factor in crop production.

The study of soils furnishes work in the laboratory and in the field, and the school equipment should make suitable provision for both. In schools having good laboratories for physics and chemistry it may be possible to utilize one or both of these rooms—though a separate room is much better—and some of the apparatus used in teaching physics and chemistry need not be duplicated, perhaps, for

the soil work. In this laboratory there should be a supply of running water and gas for each student's desk. One compound microscope and analytical balance, or more, according to the size of the class, ought to be provided, besides the hand magnifiers for each student and scales of the Harvard trip or similar pattern. Apparatus for collecting samples of soils, an oven for drying these soils, tubes for making various determinations with regard to soil moisture, Bunsen burners, crucibles, stands, beakers, tubing, and soil thermometers should be included.

A SCHOOL MUSEUM.

For the study of plants and crops in division 2 of the suggested classification, the laboratory should contain an abundance of carefully selected and prepared specimens of farm crops, especially of those crops grown in that community, and of the weeds that are most common and troublesome. As far as possible these specimens should show the whole plant, roots and tops, with matured blossoms or seeds. Sheaves of the different cereals and grasses may be gathered by the pupils. These will not only serve as material for class study, but they will make very attractive and appropriate wall decorations for the agricultural classroom. A hill of potatoes with the tubers attached to the stems and showing the root system of the plant, all placed in a large glass vessel and immersed in some preservative solution like formalin, is an object of great interest and instructive value to students. The gathering and saving for observation and study of specimen plants of unusual merit and of those that are in any way abnormal is a practice which should be encouraged among students of agriculture and which will do much to develop keenness of observation and thoughtfulness.

Of course this laboratory should be well stocked with specimens of seeds of farm crops of all classes and varieties that are or might be grown in that district. The specimens should be carefully labeled. Convenient and practical appliances for seed testing are an important part of this outfit.

Samples of the various commercial fertilizers on the market should be kept with a statement of the chemical analysis of each. There should also be ample provision for growing crops both indoors and outside, in various kinds of soils and conditions of culture. I believe that every high school teaching agriculture should have a glass house properly heated, where plants may be grown and studied during that portion of the year when the climate will not permit the work to be carried on outside. Such a house, which is not necessarily very expensive, is really indispensable to thorough work in this division of an agricultural course. Where there is no glass house, considerable work in growing plants may often be done in the windows of the schoolroom.

THE EQUIPMENT FOR OUTDOOR WORK.

A very necessary part of the equipment of an agricultural school is land. How much is desirable for school work is another question. I think a serious mistake is frequently made by schools in attempting to handle so much land that this part of the work becomes a burden. I believe that small plats worked with care and accuracy are of much more educational value than larger areas where part of the work is done by some one not connected with the school. So far as I know the most satisfactory school work in this division of agricultural study that has been done is at the Ontario Agricultural College, Guelph, Canada, under the direction of Prof. Lavitz, where the plats are one square rod in area and the work is done mainly by the students.

Under division 3 of the outlined classification the work can be done in the main with the same equipment as that already discussed. In addition to this there should be a small spraying apparatus—the one-barrel size is effective and not costly—and arrangements for mixing the different spraying mixtures. Also material and equipment should be provided for pruning, budding, and grafting, and for potting, layering, and setting of smaller plants.

Every school should have grounds where as many kinds of fruits, large and small, as experience has shown can be safely grown in that section, can be raised. Every home ought to have a good garden. Few do have. This is an important field for the agricultural school to develop. Hotbeds and cold frames are not expensive or difficult to make or manage. They should have a place on every farm. Unlike some of the other work, their use comes while the schools are in session.

INSTRUCTION IN ANIMAL HUSBANDRY THROUGH POULTRY RAISING.

The equipment for work in animal husbandry will probably seem to many schools somewhat more difficult to provide. In the study of the larger domestic animals pictures, charts, models, and manikins can be used to excellent advantage. Farm animals can usually be borrowed from farmers near the school. But in addition to this there should be some personal handling and care in breeding and feeding. This can hardly be done unless the school owns the animals. I think that poultry is the most available and suitable of animals for this purpose and that its use possesses so many valuable features that poultry will probably soon become standard school equipment for instruction in animal studies.

These are sufficient reasons why the public schools should concern themselves with this branch of agriculture. Poultry is kept in practically every home in the country and smaller towns and in very many homes in large cities. Poultry keeping is growing in popularity

everywhere. It appeals to young and old alike, to people of wealth as well as to those with little or no means. Its products are coming more and more into demand as a result of the greater attention paid by the public to the questions of pure food and the cost of living. Add to these circumstances the considerations that an equipment for handling and teaching poultry culture does not require a large investment of money and need not occupy much land; that it is not dependent upon climatic or seasonal conditions as are most other kinds of agricultural work; and that it may be made self-supporting or even a source of profit if properly managed. All these are further reasons why poultry deserves consideration as an educational asset.

Furthermore, the principles of animal breeding and of feeding apply equally to horses, cattle, sheep, swine, and to poultry, while the rapidity with which poultry multiplies and the shortness of time required for its development make it specially well suited for courses in animal studies. I would make one or more pens of well-bred chickens a part of the outfit of an agricultural school.

Every farm home should know how to handle and care for milk and its products. The school should be equipped with a milk tester, separator, and churn. If I were teaching in a high school I would try to rent or borrow one or more cows, care for them on or near the school grounds, and teach by actually *doing*. I know this entails any amount of work. I know it means a complete revolution in many respects of present customs and traditions of the public school, but these changes must come, and here and there have come, to meet the changed conditions.

The necessity for modern machinery and mechanical constructions on the farm to-day is so fully recognized, and the amount of money invested for these is so great that no argument should be needed to support a claim for including some provision for instruction in farm mechanics. Even a careful study of the catalogues of manufacturers of farm implements, to the end that the students may become acquainted with the appliances now used in working good farms would be time well spent. In many instances I am confident that manufacturers, or local agents, would gladly lend a school machinery for study, just as it is now lent to agricultural colleges. I would have some equipment for teaching farm drainage, sewer construction, ventilation of buildings, and farm sanitation. I would have models of farm buildings, fences, feeding racks, and things of that sort, together with equipment for giving instruction in cement construction. A few years ago one of the students at the University of Illinois was asked what he got out of his course in landscape architecture and replied, "I have learned not to hang the clothes line in the front door yard." This much, at least, the high school can teach. Pictures of attractive homes, schools, and other public buildings, with study and discussion

of the features in their setting which add to or detract from their beauty, are easily obtained and may be made quite effective. An acquaintance with the trees, shrubs, vines, and other decorative plants that can be safely used for planting in the latitude of the school may be acquired from a few specimens on the school grounds and in the vicinity.

I have said nothing thus far about the library of works on agriculture and of reference books and publications that should always be a vital part of the school equipment and always in active use. Nor have I mentioned what I consider the most important and helpful part of the whole equipment—an interested, hearty, and enthusiastic support of and participation in all this agricultural work by the patrons of the school. The experience and judgment of these residents should be of the highest value in directing and giving weight to the instruction, and their participation in the work of the school should result in a welding of interests and sympathies between home and school which would be the richest and strongest asset in the whole equipment of the agricultural secondary school.

Is there a question, Who is to get this equipment for the schools? and how? I think that rests mainly with the man behind the desk.

DISCUSSION.

After Prof. Barto's paper on the subject "Proper equipment for teaching agriculture in secondary schools" had been presented, Prof. D. J. Crosby, of Washington, D. C., opened the discussion as follows:

PROF. CROSBY.—Fortunately I have not prepared a paper on this subject. If I had I should probably go over a good deal of the ground that Mr. Barto has covered in his very excellent discussion of the equipment for teaching agriculture. He has covered the ground excellently for the public high-school equipment, and has covered it in considerable detail.

I hope, however, that Prof. Barto will pardon me if I drop a word of warning here and there and make one or two suggestions from notes that I took while he was talking. One of the words of warning is with reference to the making and using of collections of farm crops, seeds, and other materials that are brought together by teachers of agriculture in the public high schools, without sufficient provision for taking care of them for future use. It is a very easy matter to get together a lot of hay and grain and seeds and soils and other things like that, but if you were to go into a room where these collections have been brought together, and see them jumbled together in an indiscriminate mass, as I have seen them a number of times, without anybody knowing where anything is, and without anybody being able to use what is there, you would be convinced with me, I believe, that it is better not to have quite so many collections and have them in

better shape. So I think it is well to emphasize the importance of following such methods of mounting and labeling collections as Montgomery has worked out in Nebraska and others have worked out elsewhere, requiring the use of flasks, bottles, cans, lantern-slide mounts, Riker mounts, and various other devices for mounting and preserving seeds, grains, insects, and other specimens, so that they will not be destroyed and will always be convenient for use.

The use of land is a question, I think, that puzzles more teachers of agriculture than any other one problem confronting them, and I fully agree with Prof. Barto that there is danger of having too much land—entirely too much land. I recently saw some land put to pretty good use at one of the high schools in Los Angeles, Cal—the Gardena Agricultural High School. Los Angeles has seven or eight high schools, each one of which gives three or four courses and specializes in one of them. At the Gardena High School, for example, the pupil can get four years of Latin, three years of Spanish, three of German, three of French, and all the general scholastic courses, but the agricultural course is the one emphasized. The other high schools of Los Angeles are also teaching agriculture, but without putting the emphasis on the subject that the Gardena school does.

The Gardena Agricultural High School has a farm of 14 acres—a pretty large farm for a city high school. Two and one-half acres of this land is in trial gardens, used as their name indicates, to try out all sorts of semitropical and tropical vegetables and fruits, just far enough to bring them to maturity and see whether they will do well in that vicinity. To a certain extent it is an experiment station for this school and for this region. Many of the things they are growing there the boys have never seen before. It is an education for them. There is also a trial vineyard where they are trying out various grape vines, to ascertain which are the best in quality and which the most profitable. They also have a trial orchard for tree fruits, and plats of alfalfa.

I believe that all of the land used for school purposes should be put upon a trial basis, an educational basis. I do not believe, for example, that we want to have individual gardens merely for the sake of raising plants; we need to inject the experimental idea into it, or the contest idea, perhaps, to see which boy can raise the most and the best succession of garden vegetables for the table, running throughout the year. Put it on a contest basis, so that the boy who comes from working in the garden all his life will not feel that he is being forced out upon the land to do things that he knows perfectly well how to do, and without any reason being given for it. If he is engaged in some contest or some experimental work he will take a hoe and do all the weeding and thinning that is required, without any feeling of revolt.

or opposition, but if he is sent out in the garden merely to weed peas or onions or to thin beets he will find some fault.

One very necessary bit of farm equipment, it seems to me, is a small nursery of seedlings for educational work—for budding, for grafting, for transplanting, and work like that—and I think that the experimental work for the nursery ought to start right from the putting of the apple seeds, or whatever are raised, into the plats, and extend from that point on to the finished tree ready for transplanting, for grafting, or putting into the orchard.

In the animal-husbandry work of public high schools I believe we shall have to depend for the majority of our equipment upon the farms in the vicinity of the school, and make trips to them to study typical animals, typical herds, typical flocks, and up-to-date equipment. It is possible, as Prof. Barto has pointed out, to have some poultry, principally to carry on some experiments for children, and to explain and demonstrate the use of incubators, brooders, and all that, but we have not yet developed a resident corps of teachers who are at the school all the year around, and we shall have to look out for the time in summer when there is no school, and make some provision for taking care of our equipment during that time.

In connection with our animal-husbandry trips, I think we should not neglect to visit the butcher shop for the information that the butcher can give us concerning the different cuts of meat and their prices; nor should we omit the creamery, the dairy barn, and other like places. If any of you were present this morning in the association which was discussing farm management, you will recall that it is considered a very essential part of their work to get out and see what the successful farmer is actually doing.

Along with whatever other equipment we may have for our work in animal husbandry, we should not forget the score cards, the record forms, the calipers, and tapes for measuring cattle, and the other necessary things that go along with a complete outfit for the information and education of the boys.

I was glad that Prof. Barto mentioned the matter of farm mechanics and I would include in farm mechanics not only the study of farm machinery, but this thing that is variously called manual training, mechanic arts, etc., in most of the schools that are teaching agriculture. I think we are in urgent need of some good pioneer who will devise a workable system of farm mechanics for the carpenter shop and the forge shop in agricultural schools.

I have recently visited one teacher of manual training in a so-called agricultural school, and said, "What are you doing for the boys who are going back on the farm, those that are taking the agricultural course?" He said, "We have some work for them on power machinery, gasoline engines, etc.," and then added "I want to show you,"

and he took me to a show room where there was a case containing all the different kinds of joints that he could possibly devise. Pointing to the case, he said, "It took us six months to go over that series of exercises." He then pointed with pride to a collection of patterns representing the ordinary output of a foundry. I asked, "How many of your boys are going to have foundries on their farms?" His reply was, "Well, it is interesting for them to know how these things are done." We waste entirely too much time in our agricultural schools on things that simply "interest the boys."

Let us compare such work with the farm mechanics' work in the manual training department of the Gardena Agricultural High School. In the seventh and eighth grades their work does not differ very much from the ordinary training work in the village or city schools, but in the high school it is real farm mechanics; it is constructive work. The necessary shopwork consists largely in making models of fences, gates, barn frames, and other things that are used upon the farm, but they do as little of that work as possible. There is always plenty to do around the school that is of a practical and substantial character and along the lines of construction work. For example, they put up potting sheds at the greenhouse, and two lath houses to shade the citrus seedlings; they make concrete tile and put in their irrigating system; they put up fences, and in fact did anything and everything connected with the work on the farm. When I was there they were constructing a house for a gas plant connected with the school, and the school board that has charge of this school had made an appropriation for a barn to shelter their horses and store their forage. This barn is not to be put up by contract, but the board will furnish whatever carpenters are needed, two or three or four carpenters—one carpenter to each squad of four or five boys, so that these boys who are taking the agricultural courses will actually put up a farm barn under expert supervision. Now, we shall not be able to put up buildings all of the time in connection with public high schools, but I think we can give much more attention than we have been giving heretofore to making the manual training work the kind of work that will at least illustrate and demonstrate the principles that the boys will put into operation when they do go out upon the farm to engage in their life work. To such boys this kind of work is of greater practical value than foundry or machine shop work, and it is just as educational.

IV. THE SMITH'S AGRICULTURAL SCHOOL AND AGRICULTURAL EDUCATION IN MASSACHUSETTS.

By R. W. STIMSON,

Agent for Agricultural Education, State Board of Education, Boston, Mass.

The Smith's Agricultural School, at Northampton, has 100 acres of land. In 1908-9 it was the only vocational agricultural school in the State; so that some of the boys who wanted secondary training in agriculture had to come from a distance and live away from home. Even now, we have the problem there of making practical the instruction of the boys who come from a distance and who have to be initiated into the mysteries of the school.

Among those mysteries is the problem—the insolvable problem, I fear—of trying to make an agricultural school show a profit. I do not know that I can better illustrate educational experience in this regard than by referring to the experience of Booker T. Washington, who says that a great industrial school, like Tuskegee, or any school that tries to be thoroughly practical, is always getting up to a level where it can show a profit, but never getting above it. The moment a boy can show a profit from his acquired skill, it is your duty to let him go. The mean is always somewhere down below the level of profit.

I am unaware of any institution which has been able to show a financial profit in connection with its total educational activity, and I have very little hope that such a profit will be shown very soon. If you do show a profit, you do it by an independent labor staff, as at the Smith's school. Here the independent labor staff carries out the processes taught by the school; and from time to time, when the instruction of the boys from a distance requires it, we put those boys into the places of the regular staff. They are given the real thing, but they are given it only from time to time. We do not depend upon them entirely for the work of the school.

Moreover, we insist that the students clear out in the summer time, that they go out on farms, that they go back to their own farms to work, or to other good farms where they shall be under absolutely economic conditions. In agriculture, just as in machine-shop work, you need to put the boy into the economic bath; you need to plunge him into it up to his eyes, and keep him there long enough for him to gain the benefit to be derived from actual economic experience. You need to put him in "all over," and the sooner you get him in "all over" the better. You need to see to it that during his schooling

the boy shall be engaged in real farming long enough and earnestly enough to develop those real powers of discrimination which ought to be exercised in determining on graduation whether or not he should go out to be a farmer. If he can not get up at 4 o'clock in the morning on the farm that requires it; if he can not stand dairying; if he can not stand the kind of work required for success in the sort of farming he thought he would like to follow, then he ought not to be a farmer. He is starting out in the wrong direction, and the quicker he finds this out, the better it will be for him. The best thing you can do for him is to put him right up against the real thing, and then let him determine whether he has made the proper selection of a calling. In this way, if farming is not what he is fit for, he can change before it is too late. We try to put the boys up against the real thing at the school itself, so far as its equipment and work will permit.

Fortunately, most of our boys have lived near enough to enable them to live and work at home during the school year, and part of the others have been secured jobs on farms near by, with the privilege of attending the school. The work of the school has been organized and conducted primarily for the benefit of such boys. Of course, we used our common sense and did not duplicate equipment that was right at hand, for the Smith's Agricultural School is within about 6 miles by trolley of the State Agricultural College. The school had a herd of cows. I advised the trustees to sell that herd, and we sold it, because I did not want our instructors nor our boys to be thinking one single minute about school cows. I wanted them to think about cows, and their profitable management on going farms. Those boys who live at home and come to school in the morning and go back at night we have worked on their own cows.

We men had organized the Connecticut Valley Breeders' Association, and had determined at the outset that we would never have a discussion without a demonstration of the thing we were talking about. For example, we decided to discuss the choice of a male calf for the improvement of a dairy herd, and we decided to have bull calves for our demonstration that came from families whose producing qualities were well known—families whose records had been kept. It turned out that the only place we could hold a demonstration with such calves was at the Massachusetts Agricultural College. We went there and held our meeting. In the midst of a demonstration of a perfect Guernsey bull calf, whose dam and dam's sister were beside him, both high record cows, and whose sire was known to be from high-producing families, a young farmer said in an undertone: "He ought to be a good one; the State owns him, and the State feeds him." Everywhere there is a tendency to discount college-owned or school-owned live stock and operations. If excellent, most farmers are likely to feel that a "barrel of money" from some easy source has

produced the result, that such a result is beyond the reach of the man who must depend upon his own farming for a living.

Our boys are given such benefits as are derivable in a practical school from judging and scoring State-owned live stock, but we take the boys to the State college for this part of their training. Our major effort is to deal with animals and operations which are parts of the equipment and work of actual going-farm enterprises. To this end we are going to have our boys build a model dairy barn and bring in for a test period one cow from each farm—the home farm of the boys. The dairy school for boys from a distance will then be run during three months of the winter. We are going to agree with the fathers of the boys as to a proper return for the use of the animals thus furnished for the three months' period. We will share with them the profits; or, for that matter, the bargain would be a good one if they were given all the profits. Under this plan every cow tested will be part and parcel of an economic farming proposition; she will represent some farmer's money and some farmer's judgment. If she is found to be returning a profit, well and good; if she is not returning a profit, the best possible service that can be rendered the owner is to let him know that she is a losing proposition.

Our boys put out 500 apple trees on a permanent, semipermanent, and filler plan this last spring; they dehorned, pruned, grafted, and sprayed old apple trees; they put out 3,000 forest trees of four different varieties; some of them have built poultry houses, and the others are working on their poultry houses now. They have fitted up a model horse stable. In short, in everything we do we try to create permanent improvements and to practice profitable methods. In all phases of our vocational education in Massachusetts, we are emphasizing the fundamental importance of "productive work."

Give a boy a stake to work for that will stimulate him to accomplish what you desire him to accomplish. Some of our boys need to be earning something. They need to be pulling their own weight in the family boat. Home farm work—not everything any year, but something every year, directed by the school—we believe to be the best means to this end. I do not myself have very much confidence in work on little school plats for boys over 14 years old. I do not believe we have a right to call a boy back from a home farm to work on a small school plat during the summer. If we have work at the school, let us have not a plat but an acre, and raise a crop worth marketing. Let us conduct our operations in such a way as to teach the boy the benefit of applying the best methods under extensive field conditions, by showing him a good profit produced by his faithful and carefully directed efforts.

I know there is a difference of opinion here. There are many things we can learn from demonstration plats; in their proper place

they are essential, particularly with reference to methods or crops that are purely experimental and should be tried out first in a small way. But it seems to me that in this secondary school work we should direct our attention mainly, not to experimental work, but to demonstrating what have proved to be "dead sure things" somewhere under farming conditions like those in our vicinity.

The results of our observations have led us to put forward this method for the development of our agricultural school movement throughout the State. Wherever there is a community or a group of towns wanting our assistance in the building up and maintaining of such a school, we say: "We will advise you as to buildings, equipment, and land; and the State will pay half of the expense of maintaining the school if you keep it up and run it in accordance with methods which we can approve." We have adopted the plan of what we call "approval in advance." At the end of a given year we go over the plans and if we find any mistakes, we correct them before we make our arrangements for the next year. If we can "approve in advance" we will help to support the work.

But the thing we are pinning our faith to, gentlemen, is the man—the man out among the farmers and among the farmers' boys, in what we call vocational agricultural departments. We, working with the local authorities, pick a man, put him in a high school and require him to give all of his time to agriculture and nothing else. We surround him with an advisory committee of five of the best local farmers. We tell him to take a three months' vacation, not in the summer but in the winter—January, February, and March.

Why do we give him so much vacation? In some States you require him to devote 11 months of the year to the work. Well, we want a permanently progressive teaching staff in our State in charge of our agricultural work, and a man can not always be lifting himself by his own boot straps. If he has a liberal vacation at that time of the year, he can go to any one of the various agricultural colleges and take a special course at a time when the professors are at home. He can thus renew his energy and his knowledge. He can bring himself up to date. He can get freshened up and come back in the spring full of vigor, animation, and enthusiasm for the work of the ensuing year.

Another thing: We are now working for the 1912 crop in all our agricultural school work in the State of Massachusetts. Not general and deferred values, but values local, individual, and immediate are our aim. Now, we may talk peanuts in the South, or citrous fruits in California, or sugar beets in Michigan, or cotton in Mississippi, or sugar cane in Louisiana, or tobacco in Kentucky. It will all be interesting, very interesting; and somewhere along the line we ought to talk of these things because of their broadening influence. Such

study gives dignity and horizon to the calling. But after all we must get right down to this boy's farm and that boy's farm, deal with conditions as each boy in the school knows them to exist on his own farm. If we dealt largely with school grains and school crops, if we dealt with silos and fertilizers, if we dealt with breeds and breeding or feeds and feeding, if we dealt with general principles only, we might almost as well be dealing with peanuts, and citrous fruit, tobacco, cotton, and sugar cane. We must get our general principles clearly into the minds of the boys. But we must show them, after they have mastered these general principles, that we can apply our teaching through our practical and progressive instructors to the particular conditions as they exist on the individual home farms of the boys themselves.

Two men got on my train the other day at Hornell, N. Y. They had rifles and they had ammunition. Their real sport would begin when they began to get their eyes on the birds. If you want a meal of game and do not get your eye on the bird, you go hungry. The bird we are getting our eye on is not birds in general, but the particular bird. After generalizing, finally, if we succeed in our work, we must get down to the particular bird, to John's farm, on which, in 1912, he wants to grow an acre of corn and get from that acre of corn his school clothes and as much more of profit as he can make that acre produce.

I must not talk very much longer. In closing, let me only add that there is one other great merit in this high-school agricultural department proposition, and that is its flexibility. If you can not do anything noteworthy at a given school, or if you get the wrong man, or if people lose courage, and you have to withdraw your effort in one locality, you have no buildings to rot down, you have no equipment to rust out. You can simply transfer your efforts and State aid somewhere else, still hoping to come back at a later day with a better man and woo your maiden once more.

V. THE UNPREPARED TEACHER OF AGRICULTURE IN HIGH SCHOOLS AND COLLEGES OF EDUCATION.

By A. V. STORM,

Professor of Agricultural Education, Iowa State College of Agriculture and Mechanic Arts, Ames, Iowa.

This question is not one of my own choosing, but has been assigned me; nor would I have selected it had it been left to my choice. However, I am willing to discuss it because it leads to the consideration of questions that are pertinent at this time. At the outset I wish to say that I do not wish to be circumscribed too closely by the wording of the topic, limiting as it does the charge of unpreparedness to teachers of agriculture in secondary schools and colleges of education. While it is highly appropriate that we should give special attention to the proper preparation of those who are to teach agriculture in secondary schools and colleges of education, let us not lose sight of the great amount of unpreparedness on the part of many of their colaborers, especially in the colleges and universities, nor of the other fact that the unprepared in agriculture are found in other educational positions than those of high schools and colleges of education.

There are perhaps two reasons why we see so clearly this unpreparedness in the teaching of agriculture in high schools and colleges of education, while we have so long been blind to a similar unpreparedness in the teaching of other college subjects. The first is the newness of agriculture as a subject in the public school curriculum; being new and hence more or less of an interloper among the already numerous full-grown and respectable members of the educational social circle, it is scrutinized with the greatest circumspection to be quite sure that it is entitled to recognition; and, as in many of our social groups of to-day, the one seeking admission must show far better credentials to get in than many of those already in must show in order to stay there. However, this is not a misfortune, for the more carefully the friends of agricultural education guard its fitness for entrance into the curriculum, the more signal will be its achievements and the more helpful its career.

The second reason why we challenge the unpreparedness of these teachers of agriculture and raise no voice against that of certain other teachers is because of a difference in the standards of preparedness. There are university and college professors holding positions of influence who, from their moral and personal habits,

are unfit to stand before young men and women. I know of no greater unfitness than this. I do not know what your position may be; but as for me, no man can possibly know enough about the subject matter to compensate for his lack of moral worth if he is to stand before my boy or girl. Other men and women there are who are so weak in the pedagogy of their work that they remain in faculties decade after decade to the contempt and loss of students until the scythe of Father Time or the purse of Father Carnegie relieves the situation. Other men and women there are whose personality makes it impossible for them to succeed, and yet, like those just mentioned, they are saddled upon suffering students and then tied in the saddle, there to remain until the pale horse and his rider shall spirit them away. Why are these persons chosen to teach and retained so long in their positions? Because they know the subject matter to be taught. And from what point of view? From that of the teacher? No; from that of the student, which is a vastly different thing. The greatest incubus upon college teaching of to-day is selecting for teaching positions and retaining therein those who have only a student's knowledge of subject matter, and who are without the other essential qualifications of a successful teacher. Why is this so? Three significant reasons appear: First, lack on the part of those who select faculties of a proper appreciation of the value of other qualifications in a teacher. Second, because it is so easy to apply the student's scholarship standard. Third, because of inadequate facilities for preparing and testing out those who are to teach. Further attention will be given to these topics a little later.

A STANDARD OF VALUES FOR THE AGRICULTURAL TEACHER.

As I understand the purport of this topic, the criticism is directed against teachers of agriculture in high schools and colleges of education not because of their moral unpreparedness, their professional unpreparedness, nor their natural unpreparedness; but for their lack of the knowledge of the subject matter to be taught. That we may have a sound basis for discussion, let us establish some standards. What are the fundamental characteristics that should mark every teacher? First, moral character; second, fitness to teach; third, general education; fourth, special education; fifth, professional education; sixth, practice.

Moral character and aptness to teach we will not discuss, realizing that they are equally essential to the rural teacher, the high-school teacher, and the college professor, whether his work be in Greek, medicine, animal husbandry, or pedagogy.

In addition to these two, what shall be the standard preparation of our teachers of agriculture? It should contain the same elements whether he is to teach agriculture in a country school, a high school,

a normal school, or a college, and would only differ in the proportionate amount of each and the special adaptation to the particular kind of school.

That we may have a type and still be specific, let us consider the proper preparation of one who is to teach agriculture in a high school, representing as it does the most urgent demand now being made upon institutions that are preparing agricultural teachers.

Besides (1) moral fitness and (2) natural fitness we have (3) general education. A very valuable and almost indispensable element in general education is that which is entirely separated from schooling, i. e., the education that comes from environment. For one who is to teach agriculture successfully in a community where general farming is practiced, not to have spent a goodly portion of his youth upon the farm is a handicap that it is well-nigh impossible to overcome. To this experience should be added a thorough training in the common branches. Not such, however, as he is now receiving; the common branches need a general purification and redirection that shall better adapt them to the needs of the elementary pupil. They need certain algebraic processes applied to them—subtraction, addition, and substitution, of which the most difficult to apply is subtraction. After this elementary education in which the arithmetic, reading, language, spelling, geography, etc., are better adapted to the past experience and future need of the child, he should receive a strong high-school course of four years with the work distributed about as follows: Mathematics, two and one-half years; English, three years; history and civics, two years; science, three and one-half years; foreign language, two years; electives, three years.

Though we may differ somewhat in the distribution of this high-school work, we shall probably agree very well up to this point; but now the question arises whether the pupil shall take his advanced work in a normal school or in an agricultural college. The organization of educational plants varies so much in different States that it is difficult to make an arbitrary decision that will seem to all persons to be just; but after much investigation and consideration, I am confident that the consensus on the part of those best prepared to judge is that it is the purpose of the normal school to prepare teachers for the elementary schools and that teachers for schools above those of elementary grade should be prepared in colleges and universities. Applying this to our situation, we must conclude:

First, that normal schools should give to all teachers some preparation in nature study and elementary agriculture.

Second, that agricultural colleges should prepare teachers of agriculture for all institutions above the elementary schools, including the normal school itself.

What preparation shall our prospective high-school agricultural teacher have in the college of agriculture?

His preparation should be in four different lines: First, general; second, technical; third, professional; fourth, practice.

His general preparation will be of two kinds. The first includes such subjects as English, public speaking, economics, commonly thought of as cultural subjects (though that nomenclature has about lost its significance), and the so-called practical subjects of mathematics and the sciences which constitute the foundation for his special work in agriculture. I wish to emphasize the need of efficient preparation in English, public speaking, and economics as a most practical preparation for the extension work which every high-school teacher of agriculture should do among his constituents.

The courses in science should be strong enough to constitute a good foundation for the student's special agricultural preparation and should be sufficient to enable him to conduct the work in any of the high-school sciences, such as botany, chemistry, zoology, physiography, and physics. The value of having the teacher of agriculture in charge of the science work in a high school is twofold; it enables many schools to have agriculture well taught, which otherwise could not do so, and at the same time the high-school sciences under these circumstances will be better taught than they are at present. It is far better to have the high-school sciences taught by the agriculture teacher than to have the plan more common at present of having agriculture taught by the science teacher.

The technical preparation of this high-school agriculture teacher should include the fundamental courses in all of the departments of the agricultural college or division. His specialty should be agriculture; not some one phase of agriculture. Any emphasis he places on one subject more than upon another should be guided by these principles: First, the greatest need of his constituents; second, the adaptability to school-teaching conditions; third, fundamental and underlying character of the subject matter.

Perhaps I may again say with safety, that so far, we may not expect serious disagreement; but now we come to a point where we may find some radical differences of opinion. If we are to judge by a practice still quite common, there are those who believe that teachers are born, and hence, need no making; who, while they believe in all other kinds of culture, do not believe in teaching culture; who think that a knowledge of the underlying principles and the best prevailing practices in any department of human activity is necessary to mark success in that activity except in the intricate, profound, and vital processes of teaching. But the most thoughtful do not take this view. They believe that one who is to teach should prepare himself for that important duty by adding, to his knowl-

edge of the subject matter to be taught, a knowledge of the mind to be taught, and of the principles and processes to be used in teaching. Of what shall this preparation consist?

The professional preparation of a teacher of agriculture in a high school, or other institution above the elementary school, should be approximately as follows:

Psychology, with a special reference to adolescence, five or six hours;

History of education, including especially the history of secondary and industrial education, four hours;

Principles of education, five or six hours;

Principles of general method and the method of the recitation, two hours;

Special methods of high-school subjects, especially methods applied to the sciences and the industrial subjects, two hours;

School management, especially as applied to high schools and colleges, two hours.

In addition to the professional preparation just outlined, there should be the equivalent of from two to four hours' practice work in the teaching of agriculture and general science subjects. This work should preferably be given during the senior year. Lesson plans, criticisms, and similar details of practice teaching should accompany this work. One prepared in this manner is ready to teach agriculture in any grade of school or college, unless it be in some of the more technical advanced courses in the agricultural colleges, for which he would need additional work in that particular subject.

Having established in some measure a set of standards, let us next ask how nearly we are approaching these standards at present. It is well known to all present that a very small percentage of those teaching agriculture have had any even approximately adequate preparation for that work. The demand has come upon us too suddenly for us to have a sufficient supply of properly prepared teachers. Our own institution at Ames can not supply one-tenth of the demand, and other institutions are probably equally embarrassed.

This, then, is the situation: We have definite standards and no men who have attained to them. We also have a large and insistent demand for teachers, and must furnish somebody. What shall we do? Shall we use all our efforts to prevent the teaching of agriculture in schools until we can prepare the teachers? No, for three reasons:

One, we shall never have teachers, except for this demand; two, more good will come from having it taught fairly well than not at all; three, we can't stop it if we try.

So we must take the other alternative, which is:

First, set all the machinery promptly into motion for the thorough preparation of teachers; second, do everything possible to improve the teachers already teaching; third, furnish the schools with the best teachers we can in the meanwhile.

Let us treat these in reverse order: Whom shall we recommend now? I believe, of those available, we should select our candidates in the following order:

First, those with natural ability, farm experience, and agricultural preparation, even though they have no professional preparation or teaching experience.

Second, those with natural ability, agricultural preparation, professional preparation, and teaching experience.

Third, those with natural ability, farm experience, good science preparation, and teaching experience.

Fourth, those with natural ability, farm experience, good science preparation, and no teaching experience.

What can we do to improve those already teaching? A few will discontinue teaching to prepare themselves fully. The summer school, the teachers' normal institute or association, and the correspondence course must do the rest. While the summer school has appeared not to increase very rapidly in the recent past, yet I believe it is destined to do a great work in the preparation of teachers for work in agriculture, especially for those who have the other essential qualifications, including preparation in college science. As for this last class, summer schools of sufficient length and offering work of a college grade will enable them to prepare to teach agriculture successfully in a high school.

The teachers' institute can furnish a point of view, some enthusiasm, some information, methods of work and devices, but can not give that thorough knowledge necessary to the proper teaching of agriculture above the elementary school. The correspondence course is more far-reaching as to numbers. It will be of inestimable value to elementary teachers, especially those of the rural schools, and of great value also to present science teachers who are trying to teach without special agricultural preparation, yet it is only a temporary expedient so far as the preparation of any but elementary teachers is concerned.

What shall we do for the thorough preparation of our teacher of the future? Where shall he get his agriculture? Where his professional preparation? Where his practice? Again, different conditions in different States may make different plans seem most advisable. The need is to organize the work that the student in his four years' college course may combine three into possibly four things, already enumerated—general education, agriculture, professional work in psychology and education, and, if possible, practice teaching.

Where shall these be given? Universities having a college or department of education, a college of agriculture, and a secondary school of practice may easily meet these demands by a reciprocal relation among these departments. Colleges or universities having departments of education but no agriculture can meet the need by establishing departments of agriculture, though to have these efficient would require a greater outlay than most colleges of this class would care to make. Colleges of agriculture unassociated with a college or department of education can solve the problem by creating a department of education, as many of them are now doing. In case a Commonwealth has its normal school and university separate from its agricultural college, it will be much wiser to create a department of education in the agricultural college than a department of agriculture in the normal school or college of education, if for no other reason than the great difference in the cost of establishing and maintaining the duplicate agricultural plant.

If departments of education are established in colleges or divisions of agriculture, what shall be the character of the work offered therein, and what the preparation of the instructional force? In my own opinion the principles, processes, and facts of agriculture should be taught in the regular agricultural college classes. The department of education should have all of the work relating to the profession of teaching, including the organization of these principles, processes, and facts of agriculture into working systems suitable for use in the schoolroom, and should also have charge of the practice work of students. If this is true, it determines very largely the qualifications of the instructional force in the department of education in such a college.

The instructor must be educated to and experienced in the science and art of teaching. If, in addition to this, he could have equally good preparation in the science and art of agriculture, the preparation would be ideal. But as such men are not now available, the only rational thing for the present is to confine the agriculturist to his agricultural last and the educationist to his educational one. As to the normal school, it is vital that the agricultural work therein be taught by a man strongly and thoroughly prepared in agriculture. With the amount of emphasis placed upon methods in all the other work, the normal-school students need most the virile presentation of agriculture from the practical and scientific points of view. This is to be obtained only by a thorough course in an agricultural college.

It is even a more serious, because a more far-reaching, misfortune to have agriculture taught in a normal school by a nonagriculturally trained teacher than it is to have the same subject so taught in a high school.

I have in no measure given these topics complete treatment. I have endeavored simply to analyze the situation and bring the salient points into clear relief without elaborating upon them either in the form of discussion or argument, thus making it possible to spend more time in discussing such phases as appeal most to those present. I trust the statements in this paper are sufficiently pertinent and positive to make discussion possible.

VI. WHAT IS BEING DONE TO PREPARE TEACHERS OF SECONDARY AGRICULTURE.

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At present the United States contains more than one hundred special agricultural schools of secondary grade. These schools are located in 17 different States, which support them in whole or in part. In 1910, agriculture was taught as a separate subject in more or less complete courses to more than 37,000 pupils in 1,800 public and 140 private high schools. The figures are taken from the reports submitted by these schools to the Bureau of Education. The number of schools giving instruction in agriculture indicates in some measure the demand for instructors qualified to teach this subject. In larger measure the figures indicate the *need* for such teachers.

It is true that much of the instruction given in these schools is very elementary and is of informational rather than of vocational character. It is true also that in the majority of them the courses are very brief. Better courses of a more practical nature, extending over a greater length of time, and covering the subject in a more thorough manner, would be given if competent instructors with the proper training could be found. Fully as many high schools are now giving four-year courses as are special agricultural schools, and the courses given by them are as vocational in their character as the courses given by the majority of the special schools. In California, for instance, 12 high schools have agricultural departments in charge of special agricultural teachers. All these schools are supplied with land for instructional purposes, varying from 3 to 27 acres in extent; all have available laboratories, and several have greenhouses. Michigan has 11 high schools with four-year courses in agriculture, each taught by a graduate of the Michigan Agricultural College. Massachusetts, New York, Iowa, Ohio, Minnesota, Tennessee, and Vermont each have several such schools. One or more may be found in almost every State in the Union.

Of the special agricultural schools and the 2,000 public and private high schools teaching agriculture, only a very few besides the institutions giving four-year courses in this subject have instructors with a college or normal school training in scientific agriculture, while a large percentage of the active teachers with this training have had no training in psychology or pedagogy. Probably no one factor has had

greater influence in retarding the introduction of substantial courses in agriculture in all those high schools whose pupils are drawn in large numbers from farming districts than the shortage of properly qualified teachers. The demand for such teachers is indicated by the numerous inquiries received by the Bureau of Education for information concerning where men may be found qualified to teach agriculture in elementary and secondary schools. In a recent letter to the bureau President B. I. Wheeler, of the University of California, writes: "The demand for male teachers in the elementary schools of California is unprecedented. There has come at one and the same time a general desire for well-equipped teachers of science and the additional demand for men particularly equipped in agriculture." President J. A. Widtsoe, of the Agricultural College of Utah, says: "Up to the present a large majority of the graduates of this institution have gone out as teachers of agriculture, home economics, mechanic arts, and related subjects." President J. H. Worst, of North Dakota College of Agriculture, writes: "The demand for these teachers is far and away beyond our ability to supply. This, for the reason that the high schools generally of Minnesota and many in North Dakota are incorporating fairly strong courses in agriculture in the high schools."

It will be several years before the supply of men available as instructors in agriculture will be sufficient to meet the demand. Although the salaries paid are from 50 to 100 per cent higher than are those for instructors in other subjects in secondary schools, the State colleges of agriculture are finding difficulty in persuading men to qualify specially for teaching, because even these salaries are not equal to those paid the graduates of these institutions in the agricultural industries.

It is important, however, that properly trained men be obtained. Agriculture as a high-school science has not yet been developed into good pedagogical form and until it is so developed a higher grade, better trained teacher is needed for the agricultural subjects than for any other subject in the high-school curriculum.

WHAT THE TEACHER OF AGRICULTURE SHOULD KNOW.

Men for this work need a liberal education in the general culture subjects, together with special training: First, in the physical and natural sciences, particularly in their relations to the science and art of agriculture; second, in technical and practical agriculture and farm practice; third, in rural sociology and agricultural economics; fourth, in general psychology and pedagogy; fifth, in special agricultural pedagogy, including the history of agricultural and industrial education, the place and purpose of agriculture in the high school, the function of the agricultural high school, special methods of teach-

ing agriculture, and other similar aspects of agricultural teachings. The opportunity for such preparation is offered by several of the State colleges of agriculture.

In each State and in Hawaii and Porto Rico there is one college of agriculture and mechanic arts, established under the provisions of the act of Congress of July 2, 1862. The law is commonly known as the land-grant act, because by it there was granted to each State public land equal to 30,000 acres for each Senator and Representative in Congress. The moneys derived from the sale of this land have formed perpetual endowment funds, the income being used for the support of the institutions. Further aid was provided the land-grant colleges by the acts of Congress of August 30, 1890, and March 4, 1907; so that now each State receives from the Federal Government, excluding the income resulting from the act of 1862, an annual appropriation of \$50,000 in addition to the money paid for agricultural experiment stations. In 17 Southern States separate institutions for negroes have been established, and the Federal appropriation is divided between the colleges for white students and those institutions.

While the agricultural work of the land-grant colleges until 1907 was along technical lines almost exclusively, many of their graduates have become special teachers of agriculture in secondary schools, with no other training than their technical agricultural courses and the other subjects in their general college course. More recently has come the demand for men trained specially for teaching, and it was largely in response to this demand that in the act passed in 1907 for the benefit of the State colleges of agriculture and mechanic arts Congress included the proviso that part of the money "may be used for the special preparation of instructors of the elements of agriculture." This measure is known as the Nelson amendment, as it is contained in an amendment to the appropriation bill for the Department of Agriculture. Under its provisions each State is now receiving for the benefit of its college of agriculture and mechanic arts the sum of \$25,000, all or part of which may be used for the special preparation of teachers of the elements of agriculture. This \$25,000 is included in the \$50,000 mentioned above. It is held by the Bureau of Education, in whose hands the administration of the Federal funds for these institutions is placed, that this language authorizes the expenditure of these funds for providing special courses in agricultural pedagogy, but not in general pedagogy.

As a result of the measure, 36 of the 50 agricultural colleges, not including the separate institutions for the colored race, at present offer some opportunities to their students to fit themselves as special teachers of agriculture for secondary school work. Twelve institutions offer only certain courses in general education elective to students in agriculture, 14 offer courses in general education and special

courses in agricultural education, 1 offers courses in agricultural education only, 7 that have departments of education allow students in these departments to elect courses in agriculture, 9 offer prescribed four-year courses for teachers, and 3 offer special one-year courses to persons preparing to teach agriculture who have already had the equivalent of the general college education. Several others will accept properly qualified persons as special students. So far the colleges have failed to attract many persons to these courses in special preparation for teaching. According to the reports required by Federal law to be made annually by the presidents of the land-grant colleges to the Bureau of Education, in the year ended June 30, 1911, 140 students were enrolled in four-year courses in preparation for teaching agriculture, 7 in two-year courses, and 116 in one-year courses.

SOME TYPICAL TEACHERS' TRAINING COURSES IN AGRICULTURE.

A description of the special features of the pedagogical training for teachers of agriculture in all of the land-grant colleges can not be given here. However, enough are included to illustrate the character of the courses offered. The institutions selected are from widely distributed parts of the country and include examples of several different methods of arrangement of this special work. The courses and arrangement of the work in the other institutions are similar to ones described here. A statement prepared by the writer, regarding the work of each land-grant college in the preparation of teachers, is given in the chapter on agricultural education in the Report of the Commissioner of Education for 1911.

The University of California recommends for the State teachers' certificates as special teachers of agriculture only students who have completed in their college course 12 semester hours of work in education and at least 27 hours in agriculture and agricultural education. The term semester hour is used here and in following statements to mean one hour per week for one semester or half year; a four semester-hour course therefore is the equivalent of four recitations a week for a semester. Seven distinct courses in agricultural education are offered, only two of which are arranged especially for students preparing for high-school work. "Agriculture in secondary schools" is a two-hour course which treats of the aims, organization, and methods of agriculture as a high-school subject; "The practice of teaching agriculture" is a graduate course which includes lectures, readings, and conferences, together with school observation and practice of teaching. A course in the history of agriculture and two courses in farm management, including some work in rural economy, are given in the agricultural college. These are recommended especially for students preparing for teaching. The 12 hours in education include

the history of education, the principles of secondary education, either educational methods or school management, and the practice of teaching. The last is a graduate course taken in connection with the course in the practice of teaching agriculture.

The University of Illinois, while allowing agricultural students to elect courses in the department of education, offers also a four-year prescribed course for prospective teachers of agriculture. This course includes 6 hours of agriculture, 31 hours of allied sciences, 17 hours of general cultural subjects, 6 hours in agricultural education, and 8 hours in general education. The work is divided as follows, the figures indicating the number of hours devoted to the subject:

Agronomy.....	21	Thremmatology.....	2½	English.....	4
Animal husbandry....	16½	Botany.....	6	Rhetoric.....	9
Dairy husbandry.....	8	Chemistry.....	15	Economics.....	2
Horticulture.....	15½	Entomology.....	2½	Education.....	8
Secondary school agri- culture.....	6	Zoology.....	5	Library science.....	2

The course in secondary school agriculture consists of a study of the features of agricultural science best adapted to high-school conditions; the best order and methods for their presentation; the process of suiting the course and instruction to the special interests and needs of each school community; and the planning and execution of laboratory and field work. The courses in education include “the principles of education” and “the principles of secondary education.” The essential difference between this course and that offered by the University of California is in the amount of technical agriculture required, the Illinois institution requiring 61 hours of work against 25 in California. Illinois gives 6 hours of work in secondary school agriculture, and California 2 hours, while in general education Illinois gives only 8 and California 12. It should be noted, however, that part of the required work for the teachers’ certificate at the University of California is graduate work, while the courses listed above given at the University of Illinois are all undergraduate.

The University of Maine also offers a four-year prescribed course which includes 50 semester hours of agriculture, 11 hours of education, and 89 hours of English, mathematics, sciences, and free electives. The course in education includes 6 hours in the history of education, 5 in the foundations of education, and 2 in child study. The work in agriculture, which is all in the last three years of the course, includes agronomy, animal industry, horticulture, forestry, farm management, veterinary science, agricultural chemistry, and bacteriology. The amount of technical agriculture coincides more nearly with that given by the University of Illinois, but at the University of Maine no courses are given to bridge the gap between these courses and the professional courses in education, as is done

at the University of Illinois and at the University of California. In other words, the student who has completed the course at the Maine institution must work out his own agricultural pedagogy and methods of teaching.

A better plan is followed by the Massachusetts Agricultural College, in which a department of agricultural education was organized by direction of the State legislature in 1907, just before the passage of the Nelson amendment by Congress. The department has but one sort of students to deal with, namely, those preparing to become special teachers of agriculture. Therefore it can devote its entire energy to the special needs of these men. Six courses are given by the department, all open as junior and senior electives: General psychology, three semester hours; history and philosophy of vocational education, three hours; general methods of teaching and special methods in agriculture, two hours; teachers' agriculture, three hours; seminar in education, four hours. The teachers' agriculture consists of a selection and review of such parts of the technical courses in agriculture, horticulture, and the biological and physical sciences as are adapted to the work of the public schools; the seminar in education is arranged for the special study of such topics as legislation and agricultural education, and the place and value of agricultural science in school courses. A department of rural social science gives 22 semester hours of elective work of special value to men preparing to teach in rural communities: Agricultural industries and resources, historical and comparative agriculture, cooperation in agriculture, agricultural economics, and rural sociology. The prospective teacher entering this college takes the prescribed course for the first two years in common with all other students. This includes 10 hours in elementary agriculture and horticulture, 20 hours in physical and natural sciences, 12 hours in English, 10 hours in mathematics, and 14 hours in French or German. In the last two years three hours are required in English and in political science. The student preparing to teach must take all courses in education, together with electives enough to make at least 17 hours of work each semester. The electives must be taken largely from courses in agriculture, horticulture, forestry, and the closely allied sciences, and from the courses in rural social science.

In his four-year course the graduate of this department has therefore had 42 hours in general cultural subjects, 20 hours in physical and natural sciences, 15 hours in agricultural education, and 67 hours of electives chosen from courses in technical agriculture, horticulture and forestry, the physical and natural sciences, and the rural social sciences. As the institution is an agricultural college with no mechanic arts college or liberal arts college included, all

courses offered are taught from the agricultural viewpoint and are closely correlated with the technical work in agriculture.

A prescribed four-year course is offered in the school of education of the University of Tennessee. The course includes even less agriculture than the University of California, only 18 hours of work being prescribed. This includes courses in agronomy, horticulture, animal husbandry, and dairying. Fifteen hours work are required in education, the courses including psychology and philosophy, the history of education, and the science and art of teaching. In addition to this arrangement students in the regular agricultural course may elect a few courses in education in their junior and senior years.

The University of Missouri was one of the first of the land-grant colleges to make special provisions for men desiring to fit themselves for teaching agriculture. Now provision is made for those intending to become general science teachers with a small amount of training in agriculture, and for those intending to prepare as special teachers of agriculture. The students in the first of these classes take all their professional work, including agriculture, in the school of education; those in the second class take their technical courses in agriculture in the agricultural college and their professional work in education in the school of education. The school of education offers three agricultural courses elective to all students preparing to teach. The "Administration of agricultural education" is a course dealing largely with the modern movements and methods in agricultural education from the standpoint of the superintendent of schools. No work in agriculture is a prerequisite. "Soils and plant culture" and "Animal husbandry" are two courses covering the fundamental principles of these subjects, arranged for prospective teachers who have had no other courses in agriculture. To secure a life certificate as a special teacher of agriculture candidates must include in their four years' work, in addition to the required subjects in the school of education, a minimum requirement of 15 hours in agronomy, animal husbandry, and horticulture from courses offered in the agricultural college for the bachelor's degree.

Mississippi Agricultural and Mechanical College has organized a "School of Industrial Education" which offers a special four-year course, leading to the bachelor's degree, in preparation for teaching agriculture or the mechanic arts. Students receive instruction in the languages, mathematics, history and civics, chemistry, physics, biology, geology, psychology, history of education, logic, ethics, sociology, besides technical courses in agriculture given in the department of agriculture. A course called "A study of the agricultural high school" is offered for advanced seniors and graduate students. This course aims to give the student a true conception of the kind

of education the agricultural high school is intended to provide, and a full understanding of the service it is to render the community at large. It aims also to give the student a practical knowledge of the most approved methods of scientific agriculture. A model farm connected with the school of industrial education is conducted to illustrate the proper function of the agricultural high-school farm. The institution is developing a one-year postgraduate course which will include work in general and agricultural education designed to fit its students for filling positions as principals of agricultural high schools. The study of the agricultural high school will be continued, and the men will be given practical work on the "model agricultural high-school farm" and practical teaching in the working boys' courses offered by the college. This additional year's work is very desirable for men intending to teach, because the college is obliged to accept in its undergraduate courses a large number of men who have not had the advantage of a complete high-school course.

Several of the land-grant colleges have made provisions for prospective teachers of agriculture, properly qualified in other respects, to become special students in agriculture or agricultural education. The Michigan Agricultural College allows graduates of other recognized colleges and of State normal schools who have had at least two years' experience in teaching to select technical courses in agriculture, entering with regular classes and taking the subjects in the same manner and at the same time as the regular students. The courses selected may be from those given in any year of the college course but must be approved by the classifying officer. A similar opportunity is offered by the Kansas Agricultural College. The University of Maine offers a prescribed one-year course open to college graduates, high-school teachers with at least two years' experience, and normal school graduates who have taught at least three years. The course includes agricultural botany, 2 hours; agricultural chemistry, 4 hours; agricultural economics, 2 hours; elementary veterinary, 5 hours; economic entomology, 2 hours; bacteriology, 1 hour; agriculture, 34 hours; horticulture, 15 hours; forestry, 2 hours; school gardening, 1 hour; and education, 2 hours.

AGRICULTURAL COURSES IN NORMAL SCHOOLS.

In all but a few cases the work in agriculture in the normal schools is intended as preparation for the required work in the elementary schools. Agriculture is a required subject in the common schools of 12 States and in the rural schools of 5 others, and is required for teachers' certificates in 14 States. This has forced it into the curriculum of the normal schools of the States where the subject is required and has aided in its inclusion in the curriculum of normal schools in other States. The past year agriculture as a separate subject, in

more or less complete form, was taught in 104 of the 196 State normal schools, and in the 24 county training schools of Wisconsin. About one-fourth of the State normal schools have graduates of agricultural colleges for instructors in agriculture. A large number of them offer brief courses extending from 4 to 12 weeks. A smaller number offer a full year's course and a few a course of greater extent.

The State normal school at North Adams, Mass., offers a three-year course in agriculture, as well as shorter courses in school and home gardening, agriculture, horticulture, and nature study. During the past three years the work was arranged and conducted with the cooperation of the State Agricultural College, which added to the faculty of the normal school an instructor and supervisor, who gave a portion of his time to instruction at the normal school and to supervision at its three training schools, a second portion to the promotion of elementary agriculture and nature study in the schools of Berkshire County—in which the normal school is located—and the remainder to instruction at the college in agricultural education. The three-year agricultural course includes all of the work in English, psychology, and pedagogy included in the regular two-year normal course. A graduate of the regular normal course or a college graduate may take the agricultural work given in the three-year course in one year. The work is intended to prepare special teachers of agriculture for supervisory work or for teaching in secondary schools. It includes the following subjects:

I. Agriculture: Soils; plant life—structures, functions, and diseases; fertilizers, tillage, crops; hotbeds, cold frames, and greenhouses; farm live stock, poultry, bees; dairying.

Horticulture: Flower and shrub gardens; window gardens; propagation, pruning, and cultivation; orchards and small fruits; forestry.

Insects and birds: Economic importance; control of injurious insects.

Farm Buildings and Machinery.

Sanitary Science.

(Agricultural physics and chemistry as these subjects are involved in preceding topics.)

Rural Social Science.

II. Nature Study: Its content and relation to science, literature, and vocational work.

III. Manual Training: Carpentry, cabinet work, forge work, assembling farm machinery.

Drawing: Freehand and mechanical, structural and decorative design, use of color, farm, and building plans.

IV. English, etc.

V. Pedagogy and Psychology.

The Fourth District State Normal School at Springfield, Mo., offers two elementary courses and one advanced course. The elementary courses together extend through five terms five hours a week and include a study of plant life, soils and soil fertility, farm crops, grain judging, enemies and diseases of plants and their control, crop rotation, feeds and feeding, live stock, poultry, dairying, and general farm management. The advanced course is a two-year course, which includes one term's work in each of the following: Dairying, animal husbandry, orcharding, farm management, poultry raising, and gardening. The institution has established a two-year agricultural high school in which the students devote one-fourth of the time to agriculture or domestic science and one-eighth of the time to pedagogy as applied to rural school teaching. The course is intended to prepare young men and women for rural school work, and graduates will receive a State teachers' certificate to teach in rural schools. The institution owns a model farm and good equipment for agricultural instruction. The instructor in agriculture is a man trained especially for teaching that subject.

The State Teachers College of Colorado, at Greeley, maintains a department of agricultural education offering nine courses. The work is arranged especially for rural teachers, and a special diploma in elementary agriculture is given to students completing the course. The institution is equipped with a farm, nursery, gardens, greenhouse, and stables. The instructor is a graduate of an agricultural college. The courses given by the department are as follows, each being a 60-hour course: Nature study; elementary agriculture; school gardening; soils and crops of the farm; animals of the farm; dairy industry and poultry husbandry; horticulture on the farm; the farm home; and rural sociology; and the rural school.

NORMAL TRAINING FOR NEGROES.

Among separate institutions for the colored race two are offering excellent opportunities to prepare for teaching agriculture in secondary schools, namely, Hampton Normal and Agricultural Institute, at Hampton, Va., and Tuskegee Normal and Industrial Institute, at Tuskegee, Ala. The Hampton Institute offers a three years' vocational course in agriculture and a special one-year course to students who have completed the vocational course and are preparing to teach agriculture. The one-year course includes the chemistry of soils, manures, and fertilizers; chemistry of dairy products; fermentation; milk testing; geology in its relation to soil formation; biology in its relation to plant and animal life; farm engineering, including a study of farm machinery and structures, and farm physics, including soil physics, the relation of the atmosphere to agri-

culture, climatology, and the organic life in the soil and air. Students taking this course are required to take also the teaching course in the training school, where they are required to teach classes in agriculture under a critic teacher. Upon the completion of both courses they receive a special diploma.

At Tuskegee students in the agricultural department preparing to teach may elect a junior-year course in elementary psychology in its relation to teaching and a senior course in the history of education and methods of teaching. These courses in education may be taken as postgraduate work by students who have completed the undergraduate work at Tuskegee or its equivalent elsewhere.

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Jewell, James Ralph. Agricultural education, including nature study and school gardens. 2d ed. rev. Washington, Government Printing Office, 1908. 148 p. 8°. (U. S. Bureau of Education. Bulletin, 1907, no. 2.)

A comprehensive survey of the status of nature study, school gardening, and elementary agriculture in the public schools in various parts of the world. Prepared in connection with the staff of the United States Bureau of Education.

Monahan, A. C. Agricultural education. Washington, Government Printing Office, 1912. 331-370 p. 8°.

Reprint of report of the Commissioner of Education for the year 1911. Chapter 9.

Digest of the reports of various State commissions on agricultural and industrial education; important legislation in several States in the 1911 session of the State legislatures; status of instruction in secondary

and elementary agriculture in each State; some types of secondary agricultural schools; a statement concerning what each State agricultural college is doing to prepare special teachers of agriculture for secondary schools; preparation of teachers in elementary agriculture in normal schools.

Monahan, A. C. Opportunities for graduate study in agriculture in the United States. Washington, Government Printing Office, 1911. 16 p. 8°. (U. S. Bureau of Education. Bulletin, 1911, no. 2.)

Data as to the courses available for graduate instruction in agriculture and the related sciences gathered in a systematic way from the State colleges of agriculture and mechanic arts, the State universities and the institutions represented in the association of American universities; classified by subjects and institutions. Courses are listed only from institutions requiring practically the completion of the standard high-school course for entrance. The bulletin is a result of an investigation of the conditions in each institution relative to the equipment for undertaking graduate work and the qualifications of instructors under whom the course is given. A supplement dealing with undergraduate courses in agriculture offered by the State colleges of agriculture has been printed for distribution in foreign countries for the benefit of students planning to come to the United States to study agriculture.

Mutchler, Fred, and Craig, W. J. A course of study for the preparation of rural teachers in nature study, elementary agriculture, sanitary science, and applied chemistry. Washington, Government Printing Office, 1912. 23 p. 8°. (U. S. Bureau of Education. Bulletin, 1912, no. 1.)

Outline of the courses presented for this purpose at the Western Kentucky State Normal School, with explanations regarding the methods of presentation.



UNITED STATES BUREAU OF EDUCATION
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EDUCATIONAL STATUS OF NURSING

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LETTER OF TRANSMITTAL.

DEPARTMENT OF THE INTERIOR,
BUREAU OF EDUCATION,
Washington, D. C., February 23, 1912.

SIR: Within comparatively recent years the trained nurse has become an important and constant helper of the physician, not only in public and private hospitals, but also in the home, taking the place of untrained watchers who, however willing, can render only an ineffective service. This work of nursing has rapidly advanced to the position of a profession requiring careful preparation for admission. Thirty States of the Union have enacted laws for its regulation, and all the other States will probably do the same within the next few years. In several of the larger cities nurses are employed by the boards of education to visit the public schools, to look after the minor ailments of the pupils, and to assist in caring for their health. For the education and training of nurses, schools have been established and are maintained in most of the States. There are at present more than 1,100 such schools, with an attendance of approximately 30,000 students. For this reason, the education of nurses and the educational status of nursing have become questions of general importance and public interest, on which the Bureau of Education, in pursuance of the purpose for which it was established, should give information. The accompanying manuscript, prepared by M. Adelaide Nutting, is an attempt to do this. Miss Nutting was for several years connected with the Johns Hopkins Hospital School for Nurses, and is at present director of the department of nursing and health of Teachers College, Columbia University, New York, and has therefore had unusual opportunities to prepare herself for this work. I recommend that the manuscript be published as a bulletin of the Bureau of Education.

Respectfully submitted.

P. P. CLAXTON,
Commissioner.

The SECRETARY OF THE INTERIOR.

EDUCATIONAL STATUS OF NURSING.

RECENT PROGRESS IN NURSING.

Although there have been no radical changes in methods of education in nursing during the past five years, there are yet substantial evidences of progress to record. Training schools for nurses throughout the country are steadily, even if slowly, effecting improvements in their work and conditions. The professional field of nursing is widening and embracing new and important activities, and offering new incentives to effort. Public interest in hospitals and training schools is growing, and an intelligent public opinion on nursing affairs is gradually forming. The education of nurses, long looked upon as a matter in which hospitals only were concerned, is now beginning to be seen as a matter in which the public also is deeply and necessarily concerned.

In training schools themselves improvement is shown as follows: Systematic instruction is steadily replacing unrelated courses of lectures, better facilities for teaching are provided, small libraries are beginning to appear, occasionally a microscope is secured, more time is allowed for teaching and for study, work is brought from the evening into the daytime. Little new subject matter is introduced, but the ordinary subjects are handled in a more thorough and comprehensive way, and there is a slight but evident tendency toward a better adjustment of theory and practice. In a very few schools higher standards of teaching and a better quality of work are secured through the introduction of specially trained teachers. Among the schools which have established such teaching positions are those belonging to the Johns Hopkins Hospital at Baltimore, the Massachusetts General Hospital at Boston, and St. Lukes, the Presbyterian, and Bellevue Hospitals, in New York. Perhaps the most conspicuous improvements are those providing better housing and living conditions for students, interesting examples of which are seen in the new, spacious, and attractively equipped buildings for students, recently erected by the Presbyterian, Bellevue, and Metropolitan Hospitals in New York and by the Children's Hospital in Toronto.

Affiliations between training schools continue, and are doing much to consolidate and strengthen the educational system, and to provide larger opportunities for many small and special schools in which

good work, though of a limited nature, is done. These affiliations are serviceable so long as it is borne in mind that a group of affiliated weak schools does not result in a strong school.

A distinct evidence of progress is seen in the demand for postgraduate work. It is encouraging to find so large a number of graduate nurses seeking opportunities for further training and knowledge, but it is disturbing to note that their laudable demand can not be adequately met at present in most hospitals, since in order to secure a minimum of actual instruction they are obliged to perform a maximum of service for the hospital. There is great need of careful study of graduate work in nursing and of the organization of suitable courses to meet well-defined needs. Apart from the schools, but reacting constantly upon them in a way both stimulating and helpful, have been the steady advances in legislation; enactments governing the examination and registration of professional nurses are now on the statute books in 31 States. They have proved a powerful agency in promoting the better education of nurses and in bringing up the standards of training schools.

The most important evidence of progress and the most significant is the endowment in November, 1910, of a department of graduate work for nurses at Teachers College, Columbia University, New York. This is the outcome of a course in hospital economy established at the college in 1899 by the American Society of Superintendents of Training Schools for Nurses and maintained by them until 1910. Lacking, however, adequate financial support, the work could not be satisfactorily developed, and its endowment by Mrs. Helen Hartley Jenkins, a trustee of Teachers College, places the work upon a permanent and stable basis and opens the way for long-needed developments. The amount of the gift is \$150,000, and it marks the first effort in this country to make suitable financial provision for any part of the education of nurses.

The department thus endowed is called Nursing and Health, the latter part of the title serving to indicate the scope of its work. It now embraces three main divisions of work and prepares, first, for teaching and supervision in training schools for nurses; second, for administration in hospitals and training schools; and third, for the more distinctly social and preventive branches of nursing, such as visiting nursing, school and municipal nursing, sanitary inspection, etc. Courses are appropriately grouped and arranged in preparation for each of these fields of work.

For the social field, courses in the college and university are supplemented by work in the school of philanthropy, in settlements, and in the municipal health department.

The requirements for admission to the department of graduate work are completion of an approved course in a secondary or normal

school, followed by a course of two or three years in a training school of accepted standards. Thirty-five students entered the department last year.

The enlargement of the professional field is continuous. Not only has the specializing tendency of the day brought into existence new forms of activity within those branches—institutional, private, and social—in which nurses have long been engaged, but new types of work are developing, and entirely new social and public demands are being made upon the nurse.

Moreover, it is unquestionable that, however largely supply may exceed demand in other fields of work, this at present does not hold true of nursing, for even in the older branches of work, which have been longest established and are best known, the demand for properly trained and competent workers is beyond the supply, while for all of the higher and more important positions in hospitals and training schools, and for the equally important fields of social and civic work which are rapidly opening up, there is as yet no adequate supply.

In institutions, such as hospitals and training schools, where formerly the superintendent of nurses was the sole officer of administration and instruction (exclusive always of the instruction embodied in the courses of lectures by physicians), or where at most she had one assistant to aid in supervision and instruction, there will now, in most larger schools, be found a graded staff of assistants and supervisors. The double office held by the superintendent of nurses is now pretty generally recognized by the additional and appropriate title of principal of the training school.

An interesting outcome of the efforts to improve training schools by a better organization of teaching is found in the creation of new positions involving little or no executive work and providing a fairly well-defined field of instruction calling for trained teachers.

In addition to these important developments in training schools and in the nursing departments of hospital work, there is an interesting and growing field for graduate nurses in actual hospital administration, and the larger number of moderate sized, and almost all of the smaller, hospitals throughout the country select trained nurses as superintendents. In the State of New York the inspector reported recently that about 55 per cent of the entire number of hospitals answering to this description were under the direction of nurses. Other types of institutions are the various sanitarium for the treatment of tuberculosis, for the care of children, for convalescents, fresh air homes, and those of a kindred nature which are preventive in purpose as well as charitable, and which have frequently important educational features in their work.

The tendency toward specialization which is developing in institutions is also observed as a growing feature of private nursing, and

there is an increasing call for nurses who have received some special preparation beyond that which the ordinary training school offers, for the care of certain special forms of disease—notably, for instance, the nervous disorders of different types, and certain diseases of infants and children where there are great disturbances of nutrition.

Dr. Lewellys Barker, physician in chief to Johns Hopkins Hospital, says of the development in these directions:

On looking over the history of nursing, I have been very much struck with the rapid expansion of the work intrusted to nurses. It must be remembered that formerly physicians did, or tried to do, nearly everything which is now done by the nurse; even the care of the bed, of the linen, and of the bathing was formerly a part of the physician's work in the hospital wards. Nurses soon demonstrated that a large part of ward work could be better done by them than by physicians, and, more and more, routine measures have been placed in their hands. Anyone who works in a hospital realizes that this transfer of routine from the physician to the nurse is still going on and this may account for an occasional misunderstanding perhaps as to what is a nurse's duty and what a physician's. I believe that nurses will do well to welcome, rather than resist, every additional opportunity for service, and the time may not be far distant when nurses will not only count the pulse, take the temperature, record the blood pressure, sterilize instruments, prepare dressings, etc., but will do far more, including, perhaps, sometimes many of the routine laboratory examinations now made by physicians. Indeed, there is already a demand for trained nurses who can make leucocyte counts, hemoglobin determinations, quantitative estimates of sugar and albumin, and scientific dietary calculations and weighings.

Thus far, nurses have, for the most part, been content to be general practitioners of nursing, but already some have begun to specialize, and it needs only half an eye to see that the near future will be marked by an extension of this tendency to specialization in nursing. While each nurse should have a general training in fundamentals of the art, there is no reason why she should not, like the physician, choose some one particular field of work which appeals to her interest and for which her natural talents may make her especially suitable. The time is fast approaching when we shall have nurses who attend chiefly or solely obstetrical cases, others who care only for pediatric cases, only for nervous and mental cases, only for fever cases, only for operative cases, only for metabolic cases, etc. Nurses who desire successfully to specialize will be compelled to acquire unusual training and experience, just as is the medical specialist. * * *

Nursing is the one profession in which all, men as well as women, will admit that women excel men. It is highly desirable that a sufficient number of the women of the better class be attracted to this work. If we expect to draw the best women into trained nursing, we must do what we can to make the rewards what they should be. The pecuniary return is not the only one to be considered. The kind of education given, the social regard insured, the interests aroused, the careers opened up, are really more motivating than any mere monetary consideration. As long as nurses were drawn from the lower classes and as long as the training was merely manual and not intellectual, there could be no profession of nursing. Now that nursing is offering ever new incentives, the position of the trained nurse has become more elevated, the educational standards are high, the time of nursing has become long enough to permit of thoroughness without overtaxing, the material position of nurses is being improved, the opportunities for higher careers in nursing are multiplied, we find the profession appealing more and more to the best class of woman. (The Johns Hopkins Nurses Alumnae Magazine, June, 1909, pp. 84-86.)

Nowhere, however, has the growth of opportunity for nurses been so great as in the field which may be broadly termed that of social welfare. Under the form and title of district and visiting nursing, a system of activities has been developed which makes of the nurse not only a skilled agency for the relief of suffering, but a teacher of sanitary and healthful living, and a power for the prevention of disease. This is looked upon as one of the most promising movements of modern times for social betterment.

Briefly reviewed, these various phases of work include ordinary district nursing among the sick poor, in which, according to Miss Waters' *Visiting Nursing in the United States*, there were engaged, in 1909, 566 associations, large and small, and something under 1,500 nurses. Recent reports bring the latter number up to nearly 2,000.

The important special branches of this work are school nursing, tuberculosis work, infant welfare work in milk stations and clinics, social service work in hospitals, dispensaries, and elsewhere, and welfare work in factories, department stores, and other industrial and commercial fields; while insurance nursing, the most recent form of preventive work, does not separate itself from regular visiting nursing and may touch at certain points almost any phase of these various branches of work. Maternity and contagious work are very special branches too little developed apart from institutions to be included here.

The social-service departments, which have been recently developed in connection with many leading hospitals and which are largely under the direction of nurses, afford peculiarly interesting and valuable opportunities for public service. The term "social service" is made to cover many activities on behalf of the patient who may have just entered or just departed from the hospital; but the main purpose of this new department of hospital work is the definite one of doing for the patient, through proper channels and agencies, certain things which are essential for his physical and mental welfare, and which the hospital can not do for him unaided. It is the avenue through which the hospital seeks for the advancement or completion of its own work, for special expert diagnosis, advice, and aid in matters affecting its patients, but not necessarily physical in their nature.

If, in some directions, these activities seem remote from those fields of service for the sick into which the nurse is usually led directly from her hospital training, the fact that she has not sought them but that they have sought her shows perhaps that the education, training, and discipline of a nurse do prove a valuable preparation for other work than nursing—a solid foundation upon which to build in many special directions. The profession of nursing is here taking on fresh significance, and the nurse to-day who is concerning herself with that

greatest of all human problems, the protection of the health of the people, represents a comparatively new idea. She is not a nurse in the usual acceptation of that term; she is a woman who has had the scientific training of a nurse, and her adequate use of this training will make of her an important factor in the progress of the human race. In the light of these new activities, which place new burdens and responsibilities upon her shoulders, her education becomes a matter of large significance.

In considering the activities of these new fields and their inherent needs, Dr. C. E. A. Winslow, professor of biology, College of the City of New York, says:

All this requires obviously enough a highly trained and specialized expert. I have no knowledge of the requisites for "sick nursing," but it is quite clear that in public-health work the visiting nurse must be no empirically trained upper bedside servant. She must understand thoroughly the general fundamental laws of hygiene and sanitation, which means a mastery of the principles of physiology and bacteriology, and she must have a minute grasp of their special application in the field of her own work, whether it be school nursing, tuberculosis nursing, or infant hygiene. She must know these things not merely as a practitioner but as a teacher, which means not only a knowledge of details but a vision of their right relationship and a talent for effective presentation.

Always there are the educational weaknesses inherent in an undertaking which is not primarily educational in aim. The course is apt to be carelessly planned, the teachers those who chance to be available, the teaching what they happen to find it easiest to give, and the laboratory equipment hopelessly inadequate. Most fundamental of all is the problem of time. It is absurd to attempt to train the nurses we need for the public-health campaign by a course which involves 2 or 3 hours a week of theory and 50 to 60 hours in the wards, not hours of clinical instruction, but for the most part a routine of unenlightening and exhausting manual work. The relation between the hospital and the training school should be a symbiotic one; it more nearly resembles a case of simple parasitism. ("The rôle of the visiting nurse in the campaign for public health," by C. E. A. Winslow. *American Journal of Nursing*, Aug., 1911, pp. 917-918.)

The extraordinary development of the work of the district nurse and its intrinsic importance have been admirably discussed by Dr. Henry Favill, superintendent of the Chicago Tuberculosis Institute. After pointing out that because of her essential adaptability to the situation, whatever it may be, the district nurse is wanted as school nurse, insurance nurse, industrial nurse, and in other different capacities, he says that in this visiting-nurse problem the great question now is that of expansion, which is inevitable; that we have arrived at practically an "impasse." He says:

The point has been reached where the structure is greater than the foundation, and the foundations have got to be broadened to insure the stability of the superstructure. * * * Shall we follow the legitimate evolution of this medico-sociologic time or shall we set arbitrary definitions to which it shall be confined? And this is a question which faces us as a very important question, because no work which has in it the inherent values that are in this system of visiting nurse has any excuse for being jeopard-

ized by mistakes, and the obligations to settle this question wisely and broadly are enormous. (Address at twenty-fifth anniversary of founding of Boston District Nursing Association, by Henry Baird Favill, M. D. American Journal of Nursing, Oct., 1911, pp. 41-42.)

The evidences of progress thus measured are clear and considerable. They show definite achievement and unquestionable advance. There are, however, evidences of another nature to be weighed, which show that tendencies are not all in the direction of progress and that some are markedly subversive of it. Reactionary ideas have taken distinct shape in certain places, and destructive forces are constantly at work. Perhaps the most noteworthy and certainly the most interesting and dramatic instance in recent years of reaction working freely against nursing education was seen in New York in 1907, when, during a brief period, moved apparently by a common impulse, three important training schools, the New York, the Roosevelt, and the New York City, abolished the three years of training which had been in operation for several years and returned to the original course of two years, abbreviating the curriculum to correspond and making other radical changes. This movement seemed to be the outcome of distinctly local feeling. It was limited to a few institutions and does not appear to have had any effect upon the general situation.

The condition in training schools which is causing grave concern among those who have long been struggling to improve the education of nurses is the persistence of low standards for admission. The enormous multiplication of hospitals and sanatoria throughout the country, with the consequent unrestricted development of training schools as a part of their working organization, has led to a very large demand for students essentially for utilitarian purposes. No adequate supply could be secured through the usual sources with the maintenance of suitable standards, and such standards have therefore been lowered or sacrificed to meet the current needs of institutions. Overwhelming evidence is available from training schools and from public and private sources showing the inferiority from almost any conceivable or tenable standpoint of the majority of present candidates for admission to training schools. Some readjustment is needed of the conditions under which students work. Some reconstruction is imperative of a system of education which was admirable when it was established 50 years ago, for other educational advantages were then not available. But it is out of right relationship with the thought and methods of education to-day.

The subject is discussed in detail in the following pages, with some suggestions as to the direction which these changes should take.

RELATION OF TRAINING SCHOOLS TO HOSPITALS.

It should constantly be borne in mind, in discussing the education of nurses, that training schools throughout this country are established as integral parts of hospitals and are conducted in all their functions under the control and general direction of hospital authorities. Recent statistics from nearly 700 training schools show that not more than 6 of them were established on any other basis than this, and that the hospital and the school are, as one response to the question on this subject stated, "all one." All schools are therefore in one sense proprietary. The system is universal, and it has become so for several reasons.

The first and most obvious reason, and the one most generally advanced, is that the school forms the most economical way by which the sick in the hospital can be nursed with a reasonable degree of efficiency. Under almost any conceivable conditions in hospitals this would probably hold true, and it is unquestionably a strong factor, perhaps the controlling factor, in the entire situation. But it should not be accepted as the only one. After giving the fullest recognition to this important aspect of the situation, after according due weight to the advantages which this school system provides for proper organization and direction of nursing work and for control of the workers, there yet remain other and less tangible reasons which should none the less be considered. There is something in the spirit which the young student brings to her work, the ardor and enthusiasm in acquiring new and wonderful knowledge, and in testing her daily increasing skill, which is a genuine and valuable asset to the hospital. It is indeed a matter of history and of fact unquestioned to-day that the hospital owes much of its present status, its position in the community, and its powers in many important directions, to the presence within it of an organized body of women whose prevailing characteristics have been and are of a high order. The search will be long before there will be found any body of persons, either students or workers, animated by higher ideals of service, guided by nobler traditions of duty and devotion, willing to render a larger measure of self-sacrificing and courageous labor for others. The standing of a hospital in a community may usually be measured by the character of its nursing staff, and if it desires to prosper and to progress it must always be able to stand the test in that direction.

To preserve these high ideals and traditions which the founders of the early training schools established and their followers have tried to uphold and cherish, and at the same time to add to the value and maintain the dignity of nursing by fostering its every effort toward larger intellectual growth, toward more definite educational standards, as well as toward increasing skill and technical efficiency, are

the important functions of the modern training school. Any conditions, therefore, in the hospital or out of it which affect or threaten to affect the training school to the injury of these ideals, traditions, and standards become of immediate and direct importance to the hospital, as well as to the entire community.

It is therefore with the interests of the hospital in mind, as well as the interests of students and the public whom they will eventually serve, that some of those who have been for many years studying closely the problems of nurses' education are asking if the present system which has finally placed the hospital in full and unquestioned control of the education of nurses will prove favorable to the best educational growth and development, to the preservation of those high traditions, standards, and ideals which, important in all professions, are essential in nursing. It is the belief of many of those who have long been identified with training-school and hospital work, and who have been largely instrumental in creating and upbuilding in both hospital and school such educational standards as now prevail, that the principle of absolute control by the hospital is unsound and that in practice it does react unfavorably upon the education and training of nurses. It is their belief that this system of control affects profoundly the essential matters of standards of admission, hours of work, length of course, conditions of student life, and, above all, the freedom of the school to develop the education of nurses in response, not only to the current needs of a particular institution, but to changing and growing social needs in the community in which the educated nurse plays an increasingly important part.

The attitude of the hospital to this principle, however, is clearly defined in the statement here quoted from the report on training schools recently published by a special committee of the American Hospital Association. "The committee has tried to consider the interests of the school apart from the hospital wherever possible. At the same time the committee recognizes that the training school is an integral part of, and subordinate to, the hospital." (The International Hospital Record, Sept. 15, 1909, p. 9.) And as if in proof of the soundness of this contention history points to the early training schools of this country, Bellevue in New York, the Massachusetts General in Boston, and others of a later date, such as the Albany (N. Y.) Training School, which, originally established by bodies outside of and independent of the hospitals, were unable to retain that status and have found it necessary to place themselves wholly or largely under hospital government.

In order that the full value of the school to the hospital may be more clearly understood, it should be explained that an actual nursing staff for the hospital is created by the establishment in it of a school of nursing, and, through the organization of its student body into a

corps of workers of various grades—probationer, junior, senior—adjusted to the varying needs of the hospital. The hospital itself becomes the school, and the actual daily and nightly routine of work in its wards and other departments stands for a system of education. The supervision which would ordinarily be required for the proper conduct of the work becomes a form of instruction; the supervisors or head nurses are, as a rule, the instructors; the superintendent of nurses is also the principal of the training school. The entire burden, in fact, of the actual care of the sick and of their immediate surroundings rests upon the students of the school; and in many hospitals, particularly those of moderate size, the students are also filling executive official positions as head nurses, assistants, night supervisors. In these capacities they are responsible for the supervision and direction of the work of younger students and for much of their practical instruction. Under such a general system the training of nurses has been carried on during the 40 years that have elapsed since the schools were first established in this country; under it to-day about 30,000 students are being trained, and the idea is now firmly entrenched in the public mind that the only available way by which the hospital can secure an adequate nursing staff for its patients is through the student body of a school which the hospital establishes, owns, and controls.

The immediate advantages of this system do not lie wholly with the hospital, for the student receives, without incurring any expenses for tuition, board, lodging, laundry, and usually uniforms, such education and training as the hospital is prepared or willing to offer, and this, even when poor in character and meager in amount, is always of definite material value to her, enabling her as a rule to become self-supporting as soon as she leaves the hospital.

PAYMENT TO STUDENTS.

In the majority of schools the student's services to the hospital are distinctly recognized by the payment of a small sum of money monthly, stated to cover expenses of uniforms and textbooks, but ordinarily more than double the amount needed for these purposes. It is estimated that expenses for uniforms and textbooks do not usually exceed \$50 per student annually, while the sum of money provided students for this purpose is seldom less than \$84 per annum, and it frequently goes as high as \$120 per annum. Formerly these money payments were higher, ranging from \$120 to \$180 annually, and were not infrequently referred to in the announcements as wages. But of late years the amount has been gradually lessened, until \$8 a month appears to be the sum given in the larger number of schools. Recent reports show that in 24 schools, largely those of high standing, the practice has been abandoned altogether, and the money thus re-

leased is applied in some measure to improvements in educational methods. Its essential obligation to the student, the hospital does, however, clearly recognize, as is shown by the statement commonly found in training school announcements that an ample equivalent for the services rendered by the student is provided in the education and training offered. What that equivalent shall be is naturally determined entirely by the hospital, which has thus established an educational system and assumed educational functions.

The hospital of modern days, with its improved facilities for the treatment of disease and emergencies, in the way of physicians, nurses, buildings, and equipment, has become a popular institution, and no community, however small, likes to be without resources of this nature. Physicians, realizing the better opportunities which the hospital usually offers for the exercise of their skill and for the recovery of their patients, press its advantages, and a change in public sentiment toward the hospital has gradually come about which has resulted in a remarkable increase in the building of such institutions. This is especially marked in the smaller towns and communities.

TYPES OF HOSPITALS.

In type, character, and capacity, as well as in aims and purposes, these modern hospitals show the widest variations. In type there will be found a long list of institutions, including: (1) The large municipal hospitals for the treatment of all classes of disease and of patients (with the exception of private paying patients); (2) the large, endowed hospitals, such as are found in some numbers in all of our large cities, general in the scope of their work and treating all classes of persons; (3) the smaller hospitals of a somewhat similar type in the smaller towns and communities; (4) the special hospitals, such as those devoted especially to (a) surgery, (b) emergency work, (c) obstetrics, (d) nervous disorders, (e) diseases of women, (f) diseases of infants and children, (g) diseases of the special senses, namely, the eye, ear, throat, and the skin, (h) tuberculosis, (i) contagious and infectious diseases, (j) chronic and incurable disorders, and (k) convalescents. These may be maintained by public funds for the benefit of the public, by private contributions for the same purpose, or by private capital for private profit.

HOSPITAL CAPACITY.

In capacity the variations are naturally very great. Statistics on this point show that in 692 hospitals reporting to the Bureau of Education the range is (exclusive of State institutions for the insane) from 5 beds up to 500. About 60 per cent of the entire number have a daily average of under 75 patients, and 172 hospitals, or about 25

per cent of the whole number, have a daily average of not more than 25 patients.

The capacity in these hospitals is as follows:

	Hospitals.
4 to 10 patients daily were found in.....	39
10 to 15 patients daily were found in.....	43
15 to 20 patients daily were found in.....	58
20 to 25 patients daily were found in.....	32
Total.....	172

Thirty-nine hospitals did not reply to this question.

RELATION OF CAPACITY TO AVERAGE NUMBER OF PATIENTS.

The average daily number of patients is used here rather than the stated number of beds because it has been found after careful study and comparison that the number of beds is no true guide to the actual daily number of patients. This average daily number of patients in nearly 50 per cent of hospitals of the class referred to has been found not to exceed one-half the hospital's capacity in number of beds; in about 75 per cent of these hospitals the average number of patients daily was not over three-fourths of the hospital's capacity, and in no instance in this group was the hospital used apparently up to its stated capacity in beds. In all but 5 of the 172 small hospitals (averaging 25 patients daily or under) training schools were maintained, and 100 of them required three years for the completion of the course of training. To the suggestion that probably some of these affiliate with larger hospitals, the answer is that 31 hospitals reported some such arrangement covering from 3 to 6 months, but that 115 hospitals out of the 172 had no affiliations, and the remaining number overlooked the question on this subject.

The number of beds in a hospital has an important bearing upon the educational facilities it offers. Taken in connection with the varieties of service, the number of beds affords some idea of the scope of work in a hospital, of the amount and variety of opportunity which it affords for the observation and study of disease and for training in the practical procedures in nursing.

The ability of the hospital to give a thorough and complete training in nursing rests then mainly upon two conditions: First, the character, variety, and extent of its service; second, the state of its finances. The first condition determines whether or not it affords suitable and sufficient opportunities for instruction and training; the second indicates its ability to provide suitable instructors, equipment, accommodation for students, and other appurtenances of a school. If the hospital treats medical, surgical, and obstetrical patients, and admits children as well as adults of both sexes, it comes

under the head of general hospitals, and as such may be considered a suitable ground for the general training and education of nurses. It is obvious that the question of numbers must be considered here, and that the very small hospitals, even though some of them may justly claim to be general in the scope of their work because they treat all classes of cases, are too restricted in actual numbers of patients to afford the requisite opportunities for observation and experience.

REQUIREMENTS IN CAPACITY FOR MAINTAINING TRAINING SCHOOL.

The New York State Education Department, in its registration of nurses' training schools, states that—

the hospitals with which such schools are connected must have not less than 50 beds and a daily average of 30 patients. Each bed must meet the requirements of the State board of charities as to air space. The hospital should provide experience in the following departments of nursing: Medical, surgical, obstetrical, and pediatric. Training schools connected with the hospitals not providing adequate opportunities for experience in all of the above departments must become affiliated with institutions approved as giving such experience. (Education Department, Bulletin, Albany, N. Y., July 1, 1911, p. 5.)

The committee on training schools of the American Hospital Association, in considering this question in a recent report, says:

It is the sense of the committee that hospitals of less than 25 beds which can not affiliate or maintain some association with larger institutions, on account of their isolated or financial condition, should not attempt to maintain training schools for the training of nurses. (The International Hospital Record, Sept. 15, 1909; p. 8.)

The Royal British Nurses' Association recognizes hospitals having 40 beds and upward as qualified to train nurses and excludes the rest. Other advocates for nurses' registration in England are pressing for a rule excluding all hospitals below 50 beds from this privilege. (The Hospital, London, Oct. 24, 1908, p. 103.)

The national committee on Red Cross nursing service has taken a similar stand, and at its regular meeting in Boston, June 1, 1911, decided that "only those nurses should be eligible for enrollment who are graduates of training schools connected with general hospitals of at least 50 beds, unless the applicant has had subsequent hospital experience or postgraduate work." (American Journal of Nursing, Sept., 1911, p. 1033.)

Such a minimum requirement as has been established in New York State is a definite gain, in that it recognizes the necessity of some standard where educational work is carried on. The minimum is still low, however, and should be so considered. The difficulty in exercising any real control in this situation is great, since, although it is not so stated, the small hospital, as a rule, does consider itself helplessly dependent on the training school to carry on its work.

Dr. Henry M. Hurd, of the Johns Hopkins Hospital, puts the matter very clearly in a recent article. He says:

In some of these smaller, unendowed hospitals, to procure graduate nurses for their service might incur an outlay which would imperil the very existence of the hospital. Hence the need of a training school for nurses with a small salary roll, instead of a large one. ("State registration and the education of nurses in the United States." *The Nursing Mirror*, London, Apr. 17, 1909.)

SPECIAL HOSPITALS.

Specialization in medicine has led, naturally, to the development of special hospitals or sanatoria designed to treat either a particular form of disease or a particular class of individuals. Examples of this type may be found in those special hospitals for the treatment of women. Such institutions have been springing up rapidly for years in all fairly well settled parts of the country, and now exist in large numbers. The majority of these are purely surgical in nature, frequently limited to gynecological disorders only, usually small in capacity, owned and managed by a physician or a small corporation, and, as a rule, devoted exclusively to private, paying patients. They are essentially commercial in character, intent, and methods. About 16 per cent of the 692 hospitals reporting to the Bureau of Education came under this classification, in that they were special, or private, or both.

As regards essentially private institutions, devoted to the care of paying patients, affording, for training, meager opportunities in a restricted field, it would seem as if the question of a school for the education of nurses could hardly arise; yet, private and special hospitals and sanatoria of this type, in numbers, have not hesitated to announce themselves ready to receive pupils and meet the obligations which a school of nursing involves. Such special branches of work as these hospitals offer are frequently found as a part of the system of a general hospital, and in these it is considered that from four to six months affords ample time and opportunity for training the nurse in any one such branch, the briefer period named being the commonly accepted period. Longer training in such special branches of work is only recommended in those cases where the student, after having received the full general groundwork, wishes to devote herself solely to a special field of work, such, for instance, as surgical nursing, or obstetrics, or the care of patients with nervous disorders, or the care of children. Yet a course of training for nurses covering three full years is quite commonly found in hospitals of the special type.

UTILIZING STUDENTS.

Not only is all the general nursing in these hospitals done through the services of the students, but in certain instances the students themselves become an actual source of direct and considerable profit

to the institution. This happens when the student enters such a private hospital for two or three years and is placed at a very early stage of her work upon special duty with a single patient, a considerable fee being charged for her services. In some instances it is said that pupils are kept at such special individual work during the greater portion of the course of their so-called training, the fees for their services going directly to the management.

But this does not exhaust the methods by which hospitals can utilize for their own profits the services of their students.

Out of the entire 692 hospitals from which statistics were recently received, 248 were found sending out their pupils into families in the community for private nursing, for periods ranging from 2 to 26 weeks, the payment for this service in almost all instances going directly to the hospital. It was difficult to secure explicit information as to the amount of time which student nurses really are devoting to outside work of this nature. Fifty-nine hospitals stated that they sent out their students, but omitted any reply to the question asking about the average amount of time in which the student was so occupied, using merely the vague but suggestive phrases "time varies," "as needed," or "subject to call."

It can be readily seen how the effort to guard the education of nurses by suitable legislation would interfere with such exploiting of the pupil nurse, and it is a well-known fact that the most persistent opponents of such legislation in the various States have been found among those representing such hospitals—those whose financial interests were involved in maintaining the status quo.

There are schools which include in their curriculum a brief course in visiting nursing, and certain students may elect this work among the sick in the poorer districts. This is always done without payment of any kind.

There are also occasional instances of emergencies in small communities where fully qualified nurses are not readily available, which may be temporarily met through some member of the nursing staff of the hospital. Such instances as these are not included in the situation above described. This discusses the practice of sending out pupil nurses during their training to earn money for the hospital, and urges that as a practice it can not be too strongly condemned.

HOSPITAL FINANCES.

Assuming, however, that the hospital is neither special nor private, nor so very small as to be unserviceable, that in type, character, and capacity it affords a suitable ground for the training of nurses, there should, it would seem, be some assurance that it is financially able to carry the double burden of a hospital and a school, that it can meet the expenses of its own work, and in addition can provide in

some reasonable measure at least for the common fundamental needs of a school.

Now, it is not generally understood what extraordinarily expensive places hospitals are to maintain; the work in them goes on unceasingly day and night, and service must be provided accordingly. The service must be in the main of an exceptionally high type, there must be certain trained and skilled workers, the appliances are almost invariably costly in nature, the equipment must be liberal enough to meet any emergency, it must stand the wear and tear of use for 24 hours out of the 24. The food ought to be the best in quality, the best and purest milk, the freshest eggs, good meats and vegetables and fruits; drugs, disinfectants, and dressings are costly, and their use is enormous. While every hospital should be watchful of expenses, too rigid economy in any one of the above matters may defeat the very purpose of the institution. The majority of hospitals are engaged in a constant struggle to make ends meet, and it is rare to hear of one that has an income large enough to fully and satisfactorily meet its legitimate expenses. How, then, can it adequately meet the equally legitimate expenses of a school? It has no margin for educational needs, and hospital authorities confronted daily with the pressing problem of actual necessities in the way of accommodation, food, clothes, drugs, appliances, and equipment are often and not unnaturally impatient with requests from the head of the training school for proper consideration for the needs of her department.

To pay for instructors, books, teaching material, and other of the simplest necessities of a school, in the face of these imperative hospital demands, seems to them an unjustifiable action. In the larger hospitals it is usually done with reluctance and inadequately; in the smaller it is usually not done at all. Yet schools can not exist without instructors, without libraries, without classrooms, without teaching material.

VARIATIONS IN HOSPITALS.

With hospitals of many types already existing, with a tendency toward increasing specialization so clear that the development of new types seems inevitable, with wide variations in capacity and in variety of service even in those of the same type, and with essential differences in character and methods of work, the difficulty of maintaining any serviceable uniformity in standards in the education of nurses is not only formidable; it is insurmountable under present conditions. The "equivalent in education" which hospitals offer their students must in the last analysis be determined, not by definite, recognized, and generally accepted standards, but by the ability of each particular hospital to measure up to such standards, and to provide adequate educational opportunities, by its sympathetic interest in the general problem of education, and by a full acceptance of its responsibilities and obligations in the educational work it has undertaken.

RELATION OF HOSPITAL TO ADMISSION REQUIREMENTS IN TRAINING SCHOOL.

At the very outset, the hospital demonstrates its unfitness for this responsibility in the control it exercises over the selection of candidates for admission to the training school. The first function of the school is the establishment of certain definite suitable requirements for admission, but the school, it must always be remembered, is the nursing staff of the hospital. The first function of the hospital is to secure enough workers of various grades to meet its daily needs, always immediate and urgent. Numbers of students it must have, whether or not they meet such standards for admission as the school, to retain its function, should maintain.

So long as there were few hospitals requiring students, and few professions other than teaching and nursing open to women, there were many more candidates for admission to training schools than could be received; a fairly rigid system of selection prevailed, and those who entered and remained were well qualified to meet the educational and other tests and demands of the day. But with the remarkable advances of recent years in medicine and surgery, aided by a quickening of social and philanthropic spirit widespread in its dimensions, hospitals have not only arisen in great numbers in every section of the country, but those already in existence have been steadily enlarging and expanding, and a continuous improvement and elaboration in work and technique is taking place. One thousand three hundred and sixty training schools are recorded in Sutton's Hospital and Institutional Directory for 1910. With this rapid growth in many directions has come a constantly increasing demand for students, and there is now great difficulty in securing enough to meet the needs of the hospital and at the same time maintain even the most moderate requirements for admission. There are, it appears, not only too many hospitals in competition for the existing number of qualified candidates, but there are too many other interesting and less arduous occupations open to women to enable nursing, under present conditions, to hold its own as an attractive field.

With very few exceptions, all hospitals, large and small, alike confess a great and increasing difficulty in securing enough students to carry on their nursing work. This is a matter of common anxiety among training-school superintendents and principals, and it is obvious that the difficulty in this direction is serious, is growing, and that it offers a great problem. The only way in which it appears to be possible for the hospital to deal with it, is by lowering still further the requirements for admission, already far too low, or by simply ignoring them altogether.

The superintendents of several important schools frankly admitted to the writer not long since that they had been obliged, in order to

get enough pupils to do the work, to bring into their classes entering that year a considerable number of students who ought not to have been admitted, owing to their inability to measure up to any satisfactory educational or cultural standards. Their reason for admitting these undesirable candidates was simply the necessity of getting the work in the hospital done.

CANDIDATES AND COURSES OF STUDY.

PRELIMINARY EDUCATION OF CANDIDATES.

Further evidence of the difficulty of securing students is the fact that in the State of New York, where the requirement has been made of one year of high-school work for admission to training schools, the efforts to have that one year removed as a requirement have been persistent and have come from some of the most representative hospitals. Their need for a large staff of workers is imperative, and it overshadows completely to them the need of the school that its standards shall be maintained.

It is not assumed that these representative training schools could not attract a fair number of students of even much higher qualifications than those stated in the requirements (the following statistics show that they can do so), but it is certain that they are unable at present to attract enough to supply adequately the needs of the hospital, and it seems tolerably clear that the principle of dependence upon the student body for all of the actual nursing work, and for a very considerable amount of other work, some purely domestic in nature, some supervisory and executive, is so universally accepted and so deeply rooted as to render hospitals generally unwilling to tolerate any conditions which affect this principle and which require a modification or frank abandonment of the plan and system upon which it is based.

Educational qualifications of 303 students forming the classes admitted in 1910 to 7 representative training schools in New York City.

Education.	Number of students.
College:	
4 years.....	10
3 years.....	2
2 years.....	3
1 year.....	20
Normal school.....	
High school or collegiate institute:	
4 years.....	107
3 years.....	24
2 years.....	44
1 year.....	14
Private schools (from 1 to 3 years).....	58
Academy.....	2
Common or grammar (supplemented in some instances by a business course or some instruction in domestic science).....	19
Total.....	303

The points to be noted in the above are that the proportion of students who fully meet the highest requirement that has yet been made for admission in any training school, namely, high-school graduation, is not far below 50 per cent, but that of the remaining number over 25 per cent fall definitely below any suitable standards upon which a sound professional education can usually be built, and, further, that the degree of attainments presented by these students shows such wide and striking differences that the question at once arises, how is it possible to work out any uniform educational standards in nursing when handicapped at the very outset by the impossibility under present conditions of establishing and maintaining any uniformity in standards or requirements for admission. In any entering class of students in a training school of good standing will be found all the degrees and shades of educational preparation, such as are included in the reports of the seven New York schools, and still more clearly are they shown in the following statistics concerning the educational qualifications of students in the Johns Hopkins Hospital training school for nurses for a period of 16 years.

Educational qualifications of training school nurses in Johns Hopkins Hospital.

Years.	Common school.	High school and collegiate institute.	Private.	Convent.	Semi-nary.	College.	Normal.
1891.....	2	5	3	1	2	3	.....
1892.....	1	3	10	2	1	3	.....
1893.....	13	5	7	2	2	4	2
1894.....	.....	.....	.....	.....	.....	.....	.....
1895.....	7	11	7	1	1	4	3
1896.....	5	18	7	5	4	2	1
1897.....	1	7	5	1	3	4	.....
1898.....	.....	3	4	2	1	2	.....
1899.....	2	10	7	1	3	3	.....
1900.....	3	11	7	1	2	3	1
1901.....	2	9	6	1	1	4	2
1902.....	5	12	10	3	2	3	.....
1903.....	2	10	4	1	4	3	5
1904.....	2	9	7	2	1	6	4
1905.....	2	14	2	.....	5	8	.....
1906.....	3	9	1	1	5	12	4

Women whose actual formal education has not gone beyond the common school, and has ended at the age of 13 or 14 years, or who have had but one year of high school, or one or two years in private school or convent, enter training schools on identically the same terms as do women bringing a college degree. The students enter the same classes and take precisely the same courses; no recognition or credit is, as a rule, given the college woman for the higher qualifications she presents or for previous work done, yet curiously enough in the announcements of most training schools will be found the statement "women of superior education preferred."

From the reports of 692 training schools made in 1911 to the Bureau of Education, it appears that about 35 per cent of the total

number state a requirement of "high school or its equivalent;" about 23 per cent call for one year of high-school work (or an equivalent); 28 per cent call for nothing beyond the common school; the remaining 14 per cent either make no educational requirements whatever, and say so in unmistakable terms, or indicate merely a preference. It has been found that the equivalent of high-school work either of four years or one year must be interpreted with great liberality, so much so, in fact, that the former may be said to have little real significance in the majority of schools as a requirement for admission.

The large, best-equipped, and well-known schools naturally attract the most desirable candidates, yet not one of them is exempt from the necessity of admitting and keeping in the school pupils of pitifully low educational attainments and mental ability in order that there may be no disturbance or breakdown of the system which requires the hospital to be "manned" at all points throughout its departments with student nurses. In the smaller hospitals the situation is in the main much more difficult and pressing, and the principals of the larger training schools are not infrequently appealed to by their colleagues of the smaller to pass on to them candidates who have failed to measure up satisfactorily to the standards of the larger school.

The ultimate effect of the lowering of educational standards for admission to training schools is thus discussed by Miss L. L. Dock, honorary secretary of the International Council of Nurses. (A letter to hospital superintendents, by L. L. Dock. *National Hospital Record*, Jan. 15, 1909.)

The plea for laxity in preliminary educational standards, low entrance requirements for hospital training schools, and even for shorter terms of training, is often made with great skill of argument, and can be so presented as to sound extremely plausible, especially when present difficulties, graphically portrayed and emphatically dwelt upon, are placed well to the forefront of the statement.

Yet it is a singularly shortsighted plea—that of providing at all costs for the present without reflection as to the future. It is, indeed, an unstatesmanlike type of mind that can advocate a deliberate choice of lower, instead of higher, standards of education, because this kind of policy tends ultimately to self-destruction. It is like the pit that one digged and into which he himself fell.

Those who live in social settlements, where there are many opportunities to observe the curves of social tendencies, see daily evidences that the way for an inadequate and superficial education lies along the path of least resistance. No special pains are needed to induce people to be poorly educated; precisely the opposite, indeed, is the actual case. What with struggle for existence on the one hand and the weight of inertia on the other, those who will be standard bearers for worthy educational ideals and human progress must wage the most unremitting warfare that peace knows.

Our hospitals to-day employ in their services so large an army of young women that their indirect influence on common school education is very great indeed. If they will continue to demand applicants of good preliminary education, the whole cause of popular education will be materially strengthened; but if they should slip down to the basis of the primary grades, and be satisfied with that plane on which children of 14 are allowed to go into industry, they will deal a serious blow to education.

It can hardly be denied that the immediate effect of a ruling on the part of all hospitals to accept, in the near future, only those applicants who have had the equivalent of a high-school education, would be to stimulate a steady procession of girls into the high school; for, after all, even the most determined pessimist can not, as yet, show that the majority of the families from which nurses come are too poor to send their daughters to school, if there is a good and practical reason why they should go.

Nor, on the other hand, can the discouraging effects of a contrary step be denied, for the world is full of the proofs of inefficiency resulting from meager education, which, in turn, is directly traceable to low ideals.

It seems plain that here is an ethical obligation of the hospital to society of a very real nature and far-reaching extent, the more so as hospitals do not rank themselves among the "soulless" corporations that seek only material gains, but claim place among the forces that make for a higher civilization and an ampler distribution of the blessings of science. From the more selfish point of view, too, it would seem suicidal for hospitals to retrograde in educational ideals, for, as they are themselves entirely dependent upon an enlightened public for their support, they would help to cut off their own source of supply by helping to bring about a falling estimate of educational requirements. If, again, hospitals should generally accept a low standard, but other lines of occupation and skilled callings should steadfastly maintain high ones, then one of two things must result, both equally discreditable to the hospital, namely, either it must be permanently satisfied with the inferior grade of worker, with the accompanying loss of its own prestige, or it must reap the advantage made possible by the uncompromising high ideals of other callings, by which a generally good standard has been sustained; in other words, the hospital will reap where it has not sown—at the best, a shabby deed.

There was a time when hospitals were quite without influence in matters of general education. That was in the day of the untrained nurse or attendant, whom some of our reactionaries would like to bring back. Strange that in those days no one was satisfied, the public least of all. After all, as a country we believe in education; indeed, we stand for it. It is one of our cornerstones. Is it, then, really respectable for men of any standing to maintain that the "equivalent" of the first high-school year is too much to exact of women who are to be intrusted with responsibilities of life and death? Should we not be ashamed to assert that a primary education is enough for hospital probationers, or that three years is too long a time for the training of a nurse, though it is not long enough for a complete knowledge of horticulture?

The thing of real importance is not that nurses should be taught less, but that all women should be taught more; not that courses of training for any serious work should be shortened, but better filled.

The arguments in behalf of lower standards are usually commercial arguments, and are, to persons familiar with the shibboleths and battle cries of the industrial struggle, ludicrously identical with those that are put forward in defense of forest and soil destruction, waste of natural resources, child labor, and other self-destructive policies. The correctness of this statement may be easily verified by the most casual reader.

The perennial widow who is compelled to depend on the wages of young and undersized boys, is the same piece of stage property as the excellent and competent nurse who possesses every known virtue but no education to speak of. One must ask why, as this excellent woman could not in any event be admitted to hospital probation until she is at least 19, should she not be encouraged to go to school until that time?

Long experience in the daily urgency of getting hospital work done, and the often unavoidable necessity of retaining probationers of elementary education, has but served to convince that it is more wholesome in the long run to hold a standard sufficiently high to act as a stimulus, even if one often consciously falls below it, than to be satisfied with one which is nothing more nor less than an indorsement of the status quo.

The present is urgent, but those in places of responsibility and authority have not the moral right to ignore the future.

AGE OF CANDIDATES.

Until the last few years the general age requirement for admission to training schools was 23 years, and it was only in exceptional instances that students were admitted under that age. But of recent years, in the effort to secure enough students to staff the hospital, this age requirement has been steadily lowered until now in the majority of schools (55.20 per cent) students are admitted at 20 years or under, and in 13.15 per cent of all schools they are admitted at 18 years of age. A further descent may be perhaps foreshadowed in the record of the two schools admitting that they receive students of 17 years of age. The age requirements in the various schools are as follows:

	Schools.		Schools.
17 years.....	2	23 years.....	12
18 years.....	91	24 years.....	1
19 years.....	48	25 years.....	7
20 years.....	241	No definite age.....	10
21 years.....	255		
22 years.....	25	Total.....	692

While there is little reason to suppose that the age standard could in the present day, be kept at 23 or even 22, yet it is a grave question whether the admission of young, immature girls of 18 and 19 to hospital wards, and to the heavy physical demands and the overwhelming responsibilities and anxieties of such work as inevitably awaits them there by day or by night, should be considered. No school dare assume that it will be able to provide influences and safeguards strong enough and far-reaching enough to protect either patient or pupil under those conditions.

There are undoubtedly a few schools in the country able to maintain suitable age standards, but the statements which have been made refer to the general situation and not to a few special instances.

CHARACTER OF WORK FOR STUDENTS.

There are certain measures which hospitals could adopt without any very great delay which would greatly relieve the present situation and check to some degree the constant flow into training schools, and thence into the community, of applicants who are fundamentally unfit for nursing, not only because of their limited general education and immaturity, but because of genuine defects in temperament, character, and habits. Hospitals, generally, could and should begin to accept the idea that a considerable proportion of actual nursing work must be paid for. Such official, executive positions as those of head nurse, supervisor (for day or night), and assistant should be filled not with students, but with graduate nurses carefully selected because of their fitness for the posts they are to occupy. They should be paid a proper salary, and provision should be made in

certain institutions in America, as has long been done in England, for an additional salaried body known as staff nurses. Beyond this, a sufficient number of employees should be provided to release the students from the performance of much of the common domestic service which pupil nurses are in nearly all hospitals daily performing. The students should of course be taught thoroughly how to do such work in order that they may know how to maintain proper surroundings and conditions for their patients, but it is a great waste of students' precious time to keep them for years repeating routine tasks of a purely domestic nature and of no educational value whatever. These suggested measures alone would substantially reduce the number of students now required to be admitted yearly, and would enable the schools to reject a considerably larger proportion of those falling below suitable standards.

HOURS OF WORK FOR STUDENTS.

The introduction of these measures, particularly that providing for a nursing staff independent of the student body, would also if properly carried out render important services to the training school in other ways. It would enable the school to shorten the hours of work for students, or, in the language of the hospital, "hours of duty." These long hours have always formed a persistent and at times an apparently immovable obstacle in efforts to improve the education of nurses and to establish a rational adjustment of practice to theory. A brief study of hours of work in 111 hospital training schools made by the writer in the year 1896 ("Working Hours in Training Schools," by M. A. Nutting, Report of American Society of Superintendents of Training Schools for Nurses, 1896, pp. 31-39) showed that at that time in very nearly two-thirds of these training schools throughout the country student nurses were on duty for 10 hours and over daily. The hours of night duty were found to be 12 hours in 70 per cent of the schools, and in the remainder they exceeded that number and ranged from 13 to 13½. In no instance were these hours found to be under 12.

The entire course of training at that date was in all schools in this country two years or under (the one exception was the training school of the hospital of the University of Pennsylvania, at Philadelphia, which adopted the three-year course in 1904), a condition which should be considered in discussing the working hours of students. Ten or more hours a day in addition to class work and study might be endured for a period of two years without obvious or immediate injury to health. The same hours carried on for three years would prove a serious strain upon the student's physical resources, inflicting perhaps irreparable injury. The conclusions reached in this first study of working hours of students were that they were universally excessive,

that their requirement reacted injuriously not only upon the students, but eventually upon the patients and the hospital, that it was a short-sighted and unjustifiable economy in hospital administration which permitted it to exist. Fifteen years later, statistics show that though the course of training has now in the great majority of schools been lengthened to three years, shorter hours of work have not generally accompanied this change, and that progress in that direction has been slow and unsatisfactory. Nearly half (45.4 per cent) of the entire number of hospitals reporting on this subject still require a working day of 10 hours and over. The following statistics are from reports received recently by the Bureau of Education, and presented with them for comparison are statistics on the same subject in 1896.

Hours of duty in 1911 and 1896.

Hours of duty.	Schools in 1911.	Schools in 1896.
8.....	69	2
8½.....	43	0
9.....	239	11
9½.....	26	29
10.....	220	14
10½.....	0	32
11.....	22	3
11½.....	0	14
12.....	44	3
More than 12.....	0	3
Hours not given.....	29	.....
Total schools.....	¹ 692	² 111

¹ Percentage under 10 hours in 1911, 54.6.

² Percentage under 10 hours in 1896, 37.8.

In speaking of hours it must be remembered that these statistics refer only to practical work in ward, clinic, operating room, or other hospital department, and not to any portion of theoretical work; that the 10 hours in question are required of the student irrespective of lectures, class, or study. This practical work, also, is in many of its aspects unusually exacting and fatiguing; much of it is done while standing, bending, or lifting; much of it is done under pressure of time and nervous tension, and to a considerable degree the physical effort which the student must make is accompanied by mental anxiety and definite, often grave, responsibility. Viewed from any standpoint whatever, real nursing is difficult, exacting work, done under abnormal conditions, and all the extraordinary, subtile, intangible rewards and satisfactions which are bound up in it for the worker can not alter that fact.

Ten hours, or even nine hours, of work daily of this nature can not satisfactorily be combined with theoretical instruction to form a workable educational scheme. It is futile, and it should frankly be so conceded, to offer instruction to students who are unable through fatigue to make the required mental effort, who can not, if they would,

bring freshness, enthusiasm, or even intelligent interest to the subjects presented. The attention of tired students may be held by an exceptionally able lecturer for brief periods, but sustained work is out of the question. The student under these conditions not only loses the valuable knowledge which should illuminate every step of her work, but is liable through fatigue to misunderstand or misinterpret the instruction designed to afford her a safe basis upon which to build correct practical procedures. The direct effect of this is an immediate loss to the student; the indirect effect is a steady loss of interest in that part of her work which she can not by any possible effort find time and strength to handle satisfactorily. The importance of the practical side of her work is highly emphasized, that of the theory is minimized and belittled. It is not surprising that student nurses in training schools should eventually grow to exalt the practical above everything. It is the logical and inevitable result of the daily lessons taught them of the relative importance of the two factors in their education. Another aspect of these long hours, and one of extreme importance, is their bearing upon the health of student nurses.

Included in the special questionnaire on hours of work were questions on the average number of days of illness per student, the nature and causes of such illnesses. The replies received did not lend themselves readily to ordinary methods of tabulation, but as far as could be gathered the illnesses of students were due to one or more of the following causes: Overcrowded wards, overcrowded and unsanitary nurses' homes, overwork due to shortage of pupils, fatigue, exposure, overheating, poor food, not enough outdoor life, too little play, epidemics—these all figured as being in some measure contributory to the illnesses of students recorded in the various institutions. Of interest was the statement made in one reply that improved accommodations for more nurses brought down the number of pupils off duty on account of illness.

That long hours of ward work are, however, in most hospitals in the last analysis the main factor in causing, directly or indirectly, sooner or later, a heavy percentage of illness, those familiar with hospital life and its demands will not be disposed to doubt, and lowering the age of admission to schools becomes in its relation to prevailing hours of work a matter of the utmost importance. Dr. Frederic Lee, whose studies of fatigue in its relation to health are authoritative, makes the point that the fatigue resulting from long hours is far more serious in its effects upon such younger candidates as are now entering our schools—of such ages, for instance, as 18, 19, and 20—than upon the older student of former years. The shorter day, therefore, is seen to be important from the standpoint of the younger student, as well as from the effects of the longer (three years') course of training.

How largely the superintendents of training schools feel the need of improvement in this direction may be gathered from the fact that over two-thirds of the replies to the questions on this subject suggested shorter hours as advisable or necessary, that a large proportion of these stated their firm belief in an 8-hour day, and that almost every reply which came showed clearly in one way or another the difficulties under which the schools were laboring in trying to carry on the hospital work with the existing number of students. Many replies expressed outright the urgent need of more nurses, and one stated frankly that in order to adhere to a proper system of hours, and not make them dependent on hospital conditions, she would require a 20 per cent increase in the number of students—which she was quite unable to secure.

An interesting reply from a school where, as nearly as could be discovered, the working hours were 11 was to the effect that these hours were very satisfactory, and that the patients disliked a change of nurse even from day to night. Another stated "12 hours are not too many if there is plenty of good, nourishing food."

LENGTH OF ACADEMIC YEAR.

In considering this whole question of time and hours, it must not be forgotten that, as compared with other professional schools or with colleges, the training-school year is unprecedentedly long. It covers, in the majority of schools, 50 weeks each year, in which there are no Christmas, Easter, or Thanksgiving holidays and rarely a whole free Sunday. The annual vacation period is generally two weeks in length and although there are some schools allowing three weeks or even one month, there are others allowing but 10 days of vacation annually. In all schools it is customary to require the student to make up to the hospital every day or half day lost by illness or absence. Contrast the 50 weeks of the training school year with the 32 or 36 weeks of the academic year in the college or professional school. It is the rare instance in which the year in either of these institutions extends to 38 or 40 weeks. In point of actual time, therefore, the course of training in the majority of schools, which covers three years, as the accompanying table shows, is equivalent to four full academic years.

Length of period of training.

Number of years in course—	Number of schools.
4.....	¹ 1
3½.....	² 1
3.....	501
2½.....	82
2.....	103
No data.....	4
	<hr/> 692

¹ The Waltham School, Waltham, Mass

² The Presbyterian School, Chicago, Ill.

In connection with so long a course of training, long hours of work take on a new significance. They seem an intolerable offense against the principles for which the hospital and training school are standing in modern society, the principles upon which efforts are based to preserve and protect health and to advance knowledge concerning them.

The late Mrs. Hunter Robb, the first principal of the training school in the Johns Hopkins Hospital, Baltimore, and an authority on nursing education, pointed out in the very beginning the dangers of adopting the three years' (calendar years) course unless with it came shorter hours, and she insisted that superintendents of nurses ought to hold to the two years, and not consider adding to them, unless they were prepared to limit the day's work of practical nursing to eight hours. In an address on this subject written in 1895, and read at a meeting of superintendents of training schools, she said (Transactions of the American Society of Superintendents of Training Schools for Nurses, 1895, p. 36):

I am sure that many of you have had some qualms of conscience at the way in which we are sometimes forced, I might almost say, to drive our pupil nurses through a two years' course. I assure you that I have had myself many anxious moments for the future of certain of my pupils as regards their health. It is well known that a combination of physical and mental labor is more exhausting than simple manual or simple mental occupation. It is true that for a time such a strain can be borne without producing any permanent injurious effects, and it is possible in most cases for women, to stand the strain imposed upon them for two years, although I am afraid that not all of them come out of the trial unscathed. If, however, this high pressure is to be kept up for three years, I am sure that the health of the nurses will suffer. A woman who works physically over eight hours a day is in no mental condition to profit to any extent by class instruction or lectures. I maintain, therefore, that the three years' course must not be considered at all unless the hours of practical work are shortened, but if the two changes can be made together, then the preservation of the health of the nurse and the extension of her education and training will be insured. This again will result in an increase in her competency and consequently will be productive of greater benefits to the patients who come under her care during her training, and after she has graduated.

Whatever changes may arise in the future in the system of educating nurses, this question of shorter hours certainly is a matter of immediate, paramount importance, and perhaps no one aspect of training-school work has greater influence upon prospective candidates than this one of the long hospital hours.

NEED OF VITAL STATISTICS.

It is felt by some of those who have been identified for many years with hospitals and training schools, that there is need for carefully secured vital statistics which shall supply exact information, not only as to the relative effect of two against three years of rigid hospital training, or the 8, 9, or 10 hour day, the conditions

under which the students live and work, the number of physical and nervous breakdowns during the ordinary course of training, but which shall carry its investigations out into the nurse's professional life and work, in an attempt to discover the length of the working life of the average nurse in various professional fields of activity—private nursing, hospital work, district work, tuberculosis work especially, and other phases of work in which nurses are now engaged in numbers. It is important to have some accurate data as to the amount, for instance, of tuberculosis which develops in nurses after they leave the training schools, and at what period; and now that the idea of requiring a careful physical examination of all students is gaining favor in schools of the highest standing, as a measure of protection both to the student, hospital, and school, it should be comparatively easy to secure such vital statistics.

THE CURRICULUM.

The general plan of work in all training schools has the merit of extreme simplicity. The accepted candidates are admitted at certain periods of the year in numbers in accordance with the needs of the hospital. In some schools it is customary to admit groups of students twice yearly, in the spring and in the autumn; in others they are admitted every three or four months; and still others admit when a vacancy occurs in the school or some special need arises in the hospital. It has been the universal custom to place these students, called "probationers," on duty in the hospital wards immediately on arrival, to confine them for the first few days to the simpler tasks in caring for the surroundings of patients, and to advance them shortly to minor duties in the actual care of patients. A certain proportion of these students thus on probation fail to pass the required tests, and retire or are dropped. The successful ones are placed in uniform, becoming the junior students on the staff, and from this point on they are pushed forward with considerable rapidity into the more difficult and important tasks and into increasing responsibility. It is naturally essential that they should be ready to render efficient service to the hospital at the earliest possible date. Some idea of the the rapidity with which this process of development goes on may be gathered from the fact that it is customary to place this young student on night duty (i. e., the sole charge of a ward of patients) at a comparatively early stage of her training, and it is expected that those who have been training her will have prepared her for this stage of her work, which may come at any time after the fourth month. Formerly it was a common custom to place student nurses on night duty at the end of the third and sometimes even of the second month. There has been great improvement in this matter of recent years,

and now many of the better type of schools postpone this trying experience until the sixth month or later.

In thus hastening the practical progress of the student for practical purposes it has been necessary to set her at many tasks without any adequate instruction to prepare her for them. She has been doing certain work long before acquiring knowledge of the fundamental sciences or the principles upon which that work is based. The few hours devoted to theory, usually not more than two a week, have made the rate of progress in that part of her education exceedingly slow, and the fatigue resulting from 9 to 10 hours of work daily have made it difficult for her to profit by the instruction offered.

PRELIMINARY COURSES.

With the view of improving this feature of training-school work and introducing better methods, brief preliminary courses were established in 1903 in two training schools in Great Britain, the schools of the Royal Infirmary at Glasgow and of the London Hospital at London. This attempt to give the student some slight preparation in theory and elementary nursing procedures proved highly satisfactory, and at a little later date the same plan was tried in this country in a somewhat larger way. In the report on this subject published by the Bureau of Education in 1905, statistics were given of 43 training schools in different parts of the country in which these preliminary courses had been established. The development in this direction was recognized as marking an important and interesting advance in training-school work, and the progress made in the brief period following its introduction into a representative school of nursing, in 1901 (the Johns Hopkins Hospital training school, at Baltimore), had been so surprisingly rapid as to afford great encouragement to those who had urged it as an improvement in educational methods.

The course as originally outlined here covered a period of six months, and provided instruction in the fundamental sciences which underlie the art of nursing, such as anatomy and physiology, bacteriology and chemistry, materia medica, hygiene, dietetics (with laboratory work in cookery), housewifery, sterilization and disinfection, and the elementary principles and procedures in nursing. It was realized that a few months spent in preparation of this nature would enable the student to enter the ward and begin the practical care of patients and the study of disease under conditions favorable alike to educational growth and to the safety and welfare of her patients. Instead of being the unskillful performer of successive acts the meaning and purpose of which she was frequently entirely unable to comprehend, the student could approach her practical work prepared in some small degree, at least, to profit immediately by the opportunities

afforded, and to avoid the errors, the losses through ignorance and ill-directed effort, and the period of distressing mental confusion through which almost all conscientious student nurses passed when trained under the older system, which placed them at a very early stage of their training at the bedside of the patient, entirely unprepared and unfortified. The general principles underlying this new plan of work are recognized as sound. They are approved by the Education Department of the State of New York, which says:

Schools of nursing to be registered by the regents must be prepared to provide the following opportunities for their pupils: A preliminary course of instruction and probation of not less than four months, during which term the pupils receive the theoretical and practical instruction necessary before undertaking any actual nursing in the wards. (Education Department Bulletin, Albany, N. Y., July, 1911, p. 6.)

A further impetus toward the development of preliminary work was given by the training-school committee of the American Hospital Association, which in its recent report (the *International Hospital Record*, Sept. 15, 1909, p. 8) insisted "that a preliminary course of study of not less than three months' duration be given to each class."

Teachers College, Columbia University, New York, has offered for two years opportunity for special work in the preliminary sciences leading to nursing. Some of the subjects studied are anatomy and physiology, bacteriology, chemistry, hygiene, household economics, dietetics, cookery, home nursing and emergencies, care of children, and some work in the history and ethics of nursing and nursing sociology.

This course as outlined takes eight months, students who have carried the work satisfactorily being admitted on advanced standing to an approved training school for nurses. Bellevue, Mount Sinai, Presbyterian, and St. Luke's Hospitals, New York, and the Johns Hopkins Hospital, Baltimore, have agreed to deduct 6 to 9 months from their regular course in recognition of such preparation. Applicants must be high-school graduates, and must of course meet the requirements of the training school as to age, health, and general fitness before being admitted as pupil nurses.

In England the course, usually but six weeks in length, has been established in a good many prominent schools, and it is worthy of note that it has been recently introduced into the oldest regular training school in existence, that established by Florence Nightingale in 1860 at St. Thomas' Hospital, London. From statistics gathered through a special study on this subject made in 1911 by the committee on education of the American Society of Superintendents of Training Schools (see *Annual Report of this Society for 1911*), it was found that 86 schools have now established such preliminary courses, varying in length as the following table shows:

Length of preparatory course:	Schools.
1 college year.....	¹ 1
6 months.....	11
4 months.....	7
3 months.....	34
2 months.....	23
6 weeks or under.....	10
Total.....	86

¹ The University of North Dakota.

Preparatory courses reported in training schools in June, 1911.¹

	Location.	Hospital.	Number of beds.	Number of pupils.	When established.	Included in 3 years?	Subjects taught.						
							Anatomy and physiology.	Bacteriology.	Chemistry.	Hygiene.	Dietetics and cookery.	Materia medica.	Elementary practical nursing.
	<i>School offering preparatory course of one year.</i>												
1	University, N. Dak....	University of North Dakota.	.....	.....	1910	Yes.	×	×	×	×	×	×	×
	<i>Schools offering a six months' preparatory course.</i>												
2	Baltimore, Md.....	Johns Hopkins....	360	145	1901	Yes.	×	×	....	×	×	×	×
3	Chicago, Ill.....	Presbyterian.....	200	110	1903	No.	×	×	×	×	×	×	×
4	Cleveland, Ohio.....	Lakeside.....	269	91	1903	Yes.	×	×	....	×	×	×	×
5	Dallas, Tex.....	Texas Baptist Memorial.	135	45	1910	.....	×	×	....	×	×	×	×
6	Detroit, Mich.....	Harper.....	220	85	1902	Yes.	×	×	....	×	×	×	×
7	Minneapolis, Minn....	Northwestern.....	75	31	1904	Yes.	....	....	....	×	×	×	×
8	.....do.....	University.....	52	16	1909	Yes.	×	×	×	×	×	×	×
9	New York, N. Y.....	Presbyterian.....	233	100	1904	Yes.	×	×	....	×	×	....	....
10	.....do.....	St. Luke's.....	300	106	1902	Yes.	×	×	....	×	×	×	....
11	Philadelphia, Pa.....	Polyclinic.....	100	30	1903?	Yes.	×	×	....	×	....	....	×
12	Pittsburgh, Pa.....	Allegheny General	316	73	1909	Yes.	×	×	....	×	×	×	×
	<i>Schools offering a four months' preparatory course.</i>												
13	Boston, Mass.....	Children's.....	100	45	1904	Yes.	×	×	×	×	×	×	×
14	Chicago, Ill.....	Mercy.....	250	106	1908	Yes.	×	....	×	....	....	×	×
15	.....do.....	St. Luke's.....	315	120	1907	Yes.	×	×	....	×	×	×	×
16	Norfolk, Va.....	Norfolk Protestant	140	39	1907	Yes.	×	....	....	×	×	×	×
17	Taunton, Mass.....	Taunton.....	20	12	1910	Yes.	×	×	....	×	....	×	×
18	Toronto, Ont.....	Hospital for Sick Children.	150	55	1905	Yes.	×	×	....	×	×	×	×
19	Worcester, Mass.....	Worcester City....	295	100	1905	Yes.	×	×	×	×	×	×	×
	<i>Schools offering a three months' preparatory course.</i>												
20	Bangor, Me.....	Eastern Maine General.	100	35	1909	Yes.	....	....	....	....	....	....	....
21	Boston, Mass.....	Massachusetts General.	310	140	.....	Yes.	×	×	....	×	×	×	×
22	.....do.....	Massachusetts Homeopathic.	300	100	1906	Yes.	×	×	×	×	....	....	×
23	Bridgeport, Conn.....	Bridgeport.....	112	46	.....	Yes.	×	×	....	×	....	....	×
24	Charlottesville, Va....	University of Virginia.	110	30	1908	Yes.	×	....	....	×	×	....	×
25	Chicago, Ill.....	Cook County.....	1,800	180	1904	Yes.	×	×	....	×	×	×	×
26	.....do.....	Michael Reese.....	350	.....	.....	Yes.	×	×	....	×	×	×	×
27	Cincinnati, Ohio.....	Christ.....	120	53	1903	Yes.	....	....	....	....	×	×	×
28	.....do.....	Jewish.....	125	30	1908	Yes.	×	×	....	×	×	×	×
29	Dayton, Ohio.....	Miami Valley.....	150	45	1906	Yes.	×	×	....	×	×	....	×
30	Detroit, Mich.....	Grace.....	150	65	1908	Yes.	....	×	×	×	×	....	×
31	Fall River, Mass.....	Union.....	80	29	1908	Yes.	×	×	....	×	×	×	×
32	Indianapolis.....	Methodist Episcopal.	70	40	1911	Yes.	×	×	....	....	×	×	×
33	Lewiston, Me.....	Central Maine General.	70	33	.....	Yes.	....	×	....	×	×	×	×
34	London, Ont.....	Victoria.....	300	84	1906	Yes.	×	×	....	×	....	×	×
35	Muskegon, Mich.....	Hackley.....	40	20	1907	Yes.	×	×	....	×	×	×	×
36	New Haven, Conn.....	Connecticut.....	225	70	1905	Yes.	....	×	....	×	×	×	×
37	Newport, R. I.....	Newport.....	100	33	1908	Yes.	....	×	....	×	×	....	×
38	Newton, Mass.....	Newton.....	100	65	1907	Yes.	×	....	....	....	×	....	×

¹ Ten additional schools report a short course of six weeks or under of preparatory work.

Preparatory courses reported in training schools in June, 1911—Continued.

	Location.	Hospital.	Number of beds.	Number of pupils.	When established.	Included in 3 years?	Subjects taught.						
							Anatomy and physiology.	Bacteriology.	Chemistry.	Hygiene.	Dietetics and cookery.	Materia medica.	Elementary practical nursing.
Schools offering a three months' preparatory course—Continued.													
39	New York.....	Mount Sinai.....	500	170	1906	Yes.	X	X	....	X	X	X	X
40	.....do.....	New York Infirmary for Women and Children.	119	23	1906?	Yes.	....	X	....	....	....	....	X
41	Pittsburgh, Pa.....	South Side.....	135	30	1906	Yes.	X	X	....	X	....	X	X
42	Providence, R. I.....	Rhode Island.....	400	160	1906	Yes.	X	X	....	X	X	X	X
43	Pueblo, Colo.....	Minnequa.....	150	25	.....	Yes.	....	....	....	....	....	X	X
44	New York, N. Y.....	Bellevue.....	1,223	111	1910	Yes.	X	X	....	X	X	....	X
45	Quebec, Quebec.....	Jeffery Hale's.....	50	27	1909	Yes.	X	X	....	X	X	....	X
46	Rochester, N. Y.....	Rochester General.	110	56	1906	Yes.	....	X	....	....	....	X	X
47	St. Louis, Mo.....	Washington University.	200	45	1910	Yes.	X	X	....	X	X	X	X
48	St. Paul, Minn.....	St. Luke's.....	100	44	1910	Yes.	X	X	....	X	X	X	X
49	San Francisco, Cal.....	Lane.....	175	70	1905	Yes.	X	....	....	X	X	X	X
50	Topeka, Kans.....	Christ's.....	85	35	1908	Yes.	X	X	X	X	....	X	X
51	Toronto, Ont.....	Toronto General..	400	115	1911	Yes.	X	X	....	X	....	X	X
52	Wauwatosa, Wis.....	Milwaukee County	250	30	1911	No.	X	X	....	X	....	....	X
53	Westfield, Mass.....	Noble.....	55	13	1911	Yes.	X	X	....	X	X	....	X
Schools offering a two months' preparatory course.													
54	Akron, Ohio.....	City.....	80	25	1908	Yes.	X	X	X	X	X	X	X
55	Ann Arbor, Mich.....	University.....	300	70	1911	Yes.	X	....	....	....	....	....	X
56	Brooklyn, N. Y.....	Brooklyn.....	196	44	1906	Yes.	....	X	X	X	....	X	X
57	.....do.....	St. Mary's.....	250	60	1906	Yes.	X	....	....	X	X	X	X
58	Buffalo, N. Y.....	Buffalo Homeopathic.	40	18	1910	Yes.	X	X	....	X	X	X	X
59	.....do.....	Erie County.....	450	47	1906	Yes.	....	....	....	....	X	....	X
60	Camden, N. J.....	Cooper.....	100	35	1911	Yes.	....	X	....	X	....	X	X
61	Canandaigua, N. Y...	F. F. Thompson..	50	15	.....	....	X	X	....	X	X	X	X
62	Chicago, Ill.....	Augustana.....	200	88	1906	(¹)	....	....	....	....	....	....	X
63	Jamaica Plains, Mass..	Adams Nervine...	50	19	1906	Yes.	X	....	....	X	X	....	X
64	Kingston.....	Kingston General.	100	36	.....	Yes.	X	....	....	X	....	....	X
65	Louisville, Ky.....	John N. Norton Memorial.	100	36	1908	Yes.	....	....	....	X	X	....	X
66	Minneapolis, Minn....	Asbury and Rebecca Methodist Episcopal Hospital and Home.	105	42	.....	Yes.	X	....	....	X	X	....	X
67	.....do.....	City.....	250	46	.....	Yes.	X	....	....	....	....	....	X
68	New York, N. Y.....	City and Maternity and Gouverneur.	900	100	1902	No.	X	....	....	X	X	X	X
69	.....do.....	New York.....	225	94	1904	No.	X	....	....	....	X	....	X
70	Omaha, Nebr.....	Nebraska Methodist Episcopal.	100	45	1909	Yes.	X	X	....	X	....	X	X
71	Poughkeepsie, N. Y...	Vassar Bros'.....	65	22	1910	Yes.	X	X	....	X	....	X	X
72	Philadelphia, Pa.....	Jewish.....	150	55	1909	Yes.	....	....	....	....	....	X	X
73	.....do.....	Pennsylvania.....	315	72	.....	Yes.	....	X	....	X	....	....	X
74	Quincy, Ill.....	Blessing.....	30	20	1906	Yes.	....	....	....	X	....	X	X
75	Saginaw, Mich.....	Saginaw General..	50	20	.....	Yes.	X	....	....	X	X	X	X
76	Springfield, Mass.....	Springfield.....	100	43	1909	Yes.	....	X	....	X	X	....	X

¹ Approximately.

Preparatory courses reported in training schools in June, 1911—Continued.

Hours of theory, daily.	Practical work, hours daily.	Practical work, where done.								Tuition charged.	Uniforms supplied by—	Textbooks supplied by—	Additional assistants or instructors required.	Affiliation with college or technical school.	
		Demonstration room.	Wards.	Dispensary or clinic.	Diet kitchen.	Pharmacy.	Supply room.	Linen and sewing room.	Laundry.						
1	7	X	X		X	X	X			0	Stu.	Stu.	1	No.	39
1	8½	X	X		X		X			0	Stu.	Stu.	1	No.	40
1	9		X		X					0	Stu.	Stu.	1	No.	41
2	8		X		X					0	Stu.	Stu.	1	No.	42
1	8		X		X					0	Stu.	Hosp.	No.	No.	43
4	6		X		X					0	Stu.	Stu.	5	No.	44
1	1		X							0	Stu.	Stu.	No.	No.	45
3	5	X	X				X			0	Stu.	Stu.	1½	No.	46
2	8		X		X	X				0	Hosp.	Hosp.	1	No.	47
1	8		X		X		X			0	Stu.	Hosp.	No.	No.	48
1	8		X		X		X			0	Stu.	Stu.	2	Cooper Medical College.	49
3	6		X		X		X			0	Hosp.	Partly Hosp.	1	No.	50
3	5½		X		X		X			0	Hosp.	Hosp.	1	No.	51
1	2		X		X		X			0	Stu.	Stu.	1	No.	52
2	3				X	X	X			0	Stu.	Stu.	No.	State Normal.	53
2	6		X		X		X			0	Stu.	Stu.	1	No.	54
3	10		X		X		X			0	Stu.	Stu.	.....	University of Michigan.	55
1½	1½		X							0	Stu.	Stu.	1	No.	56
1	6		X							0	Hosp.	Hosp.	2	No.	57
3	4		X				X			0	Hosp.	Hosp.	No.	No.	58
2	6	X	X		X					0	Stu.	Stu.	2	No.	59
2	8		X							0	Stu.	Stu.	1	No.	60
2½	4½		X		X		X			0	Stu.	Stu.	1	No.	61
2	4		X				X			0	Stu.	Stu.	No.	No.	62
1	10		X							0	Stu.	Stu.	No.	No.	63
1	9		X							0	Stu.	Stu.	1	No.	64
3	5		X		X					0	Stu.	Hosp.	1	No.	65
1	8		X		X			X		0	Stu.	Stu.	1	No.	66
2	8		X							0	Stu.	Stu.	No.	Yes.	67
12½	2½		X							0	Stu.	Hosp.	No.	No.	68
1	7		X							0	Stu.	Stu.	1	No.	69
1	6		X		X					0	Hosp.	Hosp.	1	No.	70
1	8		X		X		X			0	Stu.	Stu.	No.	No.	71
1	7		X		X		X			0	Stu.	Stu.	No.	No.	72
1	2	X	X				X			0	Stu.	Stu.	No.	No.	73
1	7		X							0	Stu.	Stu.	No.	No.	74
.....	12		X							0	Hosp.	Stu.	2	No.	75
2	7		X				X			0	Stu.	Stu.	No.	No.	76

½ One month additional.

TIME GIVEN TO SUBJECTS OF STUDY.

In nine schools the preparatory course was established during the last year. The idea for which it stands finds ready acceptance in the minds of both training school and hospital workers, and to the laity it seems an essential measure for safeguarding the patient. In actual operation, however, practical difficulties appear. Increased accommodation for students is required; special instruction and supervision are essential features of the plan. Beyond this, when the demands of the hospital press, as they will, and the services of even the unskilled probationer are of value, it is well-nigh impossible to maintain any scheme of instruction uninfluenced by hospital requirements. Such conditions have operated to reduce the preliminary course from the six months of the original plan to the three months which is now the usual preliminary period, and to further impair its purpose by placing the student at the very beginning of the course in the hospital wards for several hours daily. A very small number out of the 86 schools offering preliminary courses are able, apparently, to keep their students out of the hospital service for the entire or even a major part of the brief course, and the hours of ward work are now in instances so long as to leave hardly any time for that study of the sciences and other fundamental subjects for which the preparatory course was established. With the concentration into a few months of the theory which was originally scattered through at least the entire first year, the student is of necessity required to give several hours daily to study. If this need is not recognized, and the student is called upon for eight or even seven hours of practical work daily in wards or anywhere else, she is in a worse plight than under the old system.

To derive full benefit from this all too brief opportunity for preparation, the student should of course, be permitted to give her entire time and energy to it, but where at present this is not feasible the maximum amount of hospital work required of her daily should not exceed four hours. It appears from the statistics that about 40 per cent of the 86 schools require during the preliminary course seven or more hours of hospital work daily. The introduction of these preliminary courses has formed the first steps in bringing about a proper grading of the various subjects in the curriculum. It has brought into proper place and orderly relationship such fundamental subjects as anatomy, physiology, bacteriology, hygiene, dietetics, materia medica, which formerly were scattered in a haphazard way throughout the entire course. These subjects now form an important part of the curriculum in almost all schools, and it is evident from a study of nearly 500 reports that a considerable degree of uniformity in subjects has been reached. There is, however, a striking lack of uniformity in the length of time devoted in the different schools to

these subjects. According to the records, the time allotted to the various subjects of the first year range about as follows:

Subject.	Number of hours.
Anatomy.....	8-72
Physiology.....	6-60
Bacteriology.....	2-40
Hygiene.....	2-24
Dietetics.....	5-40
Materia medica.....	10-60

In respect to all these subjects several instances were found in which the number of hours either fell below or exceeded those here recorded, but the record may be accepted as indicating the general situation and showing clearly the wide divergence of views held in training schools as to the ground which should be covered in these fundamental and essential subjects.

In anatomy and in physiology from 20 to 24 hours seems to be the usual time required in the larger number of schools, but it is noted that 40, 50, and even 60 hours are not uncommon.

In bacteriology, the majority of schools do not require more than 10 hours of work, many of these actually stating the requirement to be from 2 to 5 hours. In view of the extreme importance of this subject in the education of the nurse, as one of the very pillars upon which much of her training must rest, that school must come under criticism which fails to provide adequate work in this subject. Students of domestic science are usually required to cover one full half-year in bacteriology, chiefly of laboratory work in which the time occupied is usually not less than 60 hours. Prof. Moore, of Cornell University, believes that bacteriology plays such an "important part in the immediate physical well-being of every individual" that it should be "introduced into the common schools." (Bacteriology in General Education, Science, February 24, 1911, p. 280.)

It is noticeable in the reports how much more time is allotted in many schools to materia medica than to dietetics. This may perhaps be due to a lack of appreciation of the true relative importance of the two subjects, or to the fact that instruction in materia medica can usually be rather easily obtained without additional expense from some member of the staff, whereas instruction in dietetics calls for a specially trained teacher, who must be paid for her work. Far too little attention is given this important subject in training schools; the courses offered are brief; the work is elementary in character. There should be more work in food properties and values, in nutrition, and food preparation.

The nurse is required to be something of an expert in this province, to be able to work out satisfactory dietaries on certain general lines

laid down by the physician, not only during illness, but in convalescence, during infancy and childhood, and in those special conditions where the diet is the treatment. She should be able also to plan nourishing dietaries and advise as to healthful food in families where sickness is combined with poverty and economic difficulties must be surmounted.

But this more thorough work in foods should be preceded by at least an elementary course in chemistry, and this is equally needed as a basis for any satisfactory work in hygiene and sanitation or in *materia medica*. In some of the training schools connected with universities, it is noted that courses in chemistry are given, but these are few in number.

In all the subjects which have just been discussed, it is important that more uniformity in standards should be reached, and steady work in this direction is urgently needed.

In arrangement and grading of subjects, a somewhat curious situation appears—the first year includes, apparently, a considerably larger amount of instruction than either of the other two years. Theoretical work appears to diminish appreciably with each year, and there are schools (32 were found in the reports) in which apparently no instruction whatever is offered in the third year. Instead, therefore, of a course so arranged that the student progresses from year to year in theoretical knowledge as well as in practical experience, there is offered a course which, so far as intellectual effort is concerned, decreases instead of increases in its demands upon the student. This naturally might lead one to ask why a third year is necessary and gives color to the suggestion frequently made, that the third year is established more for the benefit of the hospital than for the student.

INSTRUCTORS.

In 315 schools (nearly half the entire number from which reports were received) there are no paid instructors. On this subject, for the remaining schools, it is difficult to present any accurate and serviceable information, since the returns show such a misconception of the data asked for as to render the results unsuitable for use. In the majority of instances the officers of instruction and supervision were evidently identical, and frequently this was stated to be the case. The salaried instructor is a new feature in a training-school work, and apart from teachers of dietetics and massage there are very few schools, probably not more than 10 in the whole country, which have any one officer whose time is devoted wholly to teaching. The conclusions reached from the reports on this subject were that teaching in training schools is now conducted almost entirely by administrative and executive officers, such as the superintendent or assistant superintendent of nursing, with the cooperation of the

visiting staff of physicians and surgeons. In the latter instance the teaching is largely through short lecture courses for which the lecturer receives no payment.

LIBRARIES.

In 299 schools out of the 692 reporting, no evidence was found of anything in the nature of a library. The reports said "no books" or "no data," or ignored the question. In the remaining schools, reports showed 92 in which the number of books did not exceed 25, and it was found not to exceed 100 in over two-thirds of the entire number reporting. In some instances libraries were reported containing from 100 books up to 1,000, and in two or three instances beyond that number. In the latter case it seemed probable that the library usually was that of the hospital, the medical school, or of the physician in charge, and thus more or less available to the student nurse, rather than a library selected with special reference to the needs of the training school and freely and easily accessible to the students at all times.

TUITION FEES FOR PRELIMINARY INSTRUCTION.

In this country tuition fees are charged in six schools, the very small sum of \$25 forming the usual fee. These schools are in all but one instance those offering a full six months' course. They are—

Johns Hopkins Training School, Baltimore, Md.....	\$50
Presbyterian Training School, Chicago, Ill.....	25
Lakeside Training School, Cleveland, Ohio.....	25
University of Minnesota, Minneapolis, Minn.....	25
University of North Dakota, Fargo, N. Dak.....	25

In the school connected with the Children's Hospital, Boston, a fee of \$200 is charged, which covers not only the preliminary instruction but that given during the entire course. This is a small but admirably managed and highly progressive school, which has by its various affiliations secured exceptional opportunities and advantages for its students, for which they willingly pay.

In this school the preliminary course is given largely in Simmons College, where the students receive all of their scientific preparation. There is a slight but distinct tendency on the part of training schools to seek some such relationship as this, and several have turned to colleges or technical schools for that scientific groundwork which the training school without endowment, trained teachers, laboratories, or equipment can not give in any satisfactory way.

In the Waltham Training School, Waltham, Mass., tuition fees amounting to \$250 are charged for the first two years of the course. This school offers an excellent preparatory course, but limited opportunities for hospital training and practice. The larger part of the students' training is obtained in the private practice of physicians, payment for their services going to the support of the school.

RELATIONS TO COLLEGES.

Some of the training schools which have succeeded in establishing such a relationship in a greater or less degree are those connected with the hospitals here named, the institutions with which they are related being given also:

- Children's Hospital, Boston, Mass., with Simmons College.
- The Presbyterian Hospital, Chicago, Ill., with Rush Medical College.
- The Mercy Hospital, Chicago, Ill., with Northwestern University Medical School.
- Wesley Hospital, Chicago, Ill., with Northwestern University Medical School.
- Evanston Hospital, Chicago, Ill., with Northwestern University Medical School.
- Provident Hospital, Chicago, Ill., with Northwestern University Medical School.
- Lane Hospital, San Francisco, Cal., with Cooper Medical College, Leland Stanford.
- Iowa Methodist Hospital, Des Moines, Iowa, with Drake Medical College, Drake University.
- Madison General Hospital, Madison, Wis., with University of Wisconsin (for some class and laboratory work).

An interesting experiment was made last year in the University of North Dakota, where a course was organized, designed to give instruction in the academic and technical subjects which precede the practical work in hospital training. The work as arranged covered one academic year and provided instruction in the usual subjects of anatomy, physiology, bacteriology, chemistry, hygiene and sanitation, dietetics, materia medica, and principles of nursing, and in addition suitable courses in psychology and sociology were offered. Arrangements were made with several adjacent hospitals to receive the students who satisfactorily completed this course. Three students entered last year, and as the movement is in the right direction, it should eventually attract a desirable grade of students and contribute materially to the improvement of nursing education. There does not appear to be here, however, any organic relation between the university and the hospitals which are said to be affiliated which would give the university control over the whole education of the nurse. Such relation would insure an adequate completion of the work begun, a proper grade and degree of instruction in actual nursing subjects, reasonable hours of practical work, etc.

TRAINING SCHOOLS FOR NURSES IN UNIVERSITIES.

Perhaps the most promising effort now being made anywhere to establish nursing on a satisfactory educational basis is that which has recently been inaugurated at the University of Minnesota, in its new school of nursing. Dr. Richard Olding Beard, professor of physiology in the university, says of it:

The university education of the nurse and the university control of the training school for nurses, as a department of instruction, is an accomplished fact. The training school for nurses of the University of Minnesota, as well as the university hospital,

is in the direct charge of the faculty of the College of Medicine and Surgery. Its preliminary courses of instruction and its undergraduate lectures are given in the laboratories and lecture rooms of that college. Its examinations are conducted by the chiefs of the college departments. Its diplomas are conferred by the board of regents of the university, upon recommendation of the faculty.

Its integrity as a teaching department is assured not only by its university control but by the fact that the university hospital exists in itself as a purely teaching institution. It is the clinical laboratory of the college. It is devoted to the education of medical students and the training of nurses. So conceived and so maintained as a teaching hospital, it must of necessity realize the highest ideals of a hospital service. Its existence is justified by the attainment of nothing less. Entertaining as it does free patients from all parts of the State, selected for the clinical contribution they offer, and selected moreover from among those who are unable to pay for care and treatment, the realization of these ideals is unembarrassed by any secondary considerations. The best results to the patient and the highest values to the student in the practice and teaching of scientific medicine are its only and its lofty aims.

The unification of medical teaching in the State of Minnesota under the immediate control of the State university guarantees the future growth and the high quality of its service. The training school will be developed as a special department of this single university school of medicine. ("The university education of the nurse." Teachers College Record.)

A somewhat similar situation in plan exists in the school of nursing of the University of Texas, which in 1897 was by action of the regents of the university created as—

one of the regular schools of the medical department of the university, and the pupil nurses are recognized as students of this branch of the medical department. The regents of the university are responsible for the instruction of the student nurses in all branches and have placed the management of the curriculum in the hands of a committee composed of the clinical instructor of nursing, the dean, and two members elected annually from the faculty of medicine by the members of the faculty. The committee has arranged a curriculum and appointed from the members of the faculty and corps of lecturers and demonstrators the special instructors in each branch. (Bulletin of the University of Texas, Mar., 1910, p. 96.)

The clinical instructor of nursing referred to above is the superintendent of nurses, who is a member of the faculty. A different and less close relationship with the university is held by those schools of nursing forming an integral part of university and other hospitals connected with the following institutions: University of Michigan, Ann Arbor, Mich.; George Washington University, Washington, D. C.; University of Virginia, Charlottesville, Va.; University of Colorado, Boulder, Colo.; Washington University, St. Louis, Mo.; University of Missouri, Columbia, Mo.

The advantages to training schools resulting from such connections with universities are emphasized in letters recently received by the writer from the heads of several such schools. They may be summarized about as follows:

(a) Lecture rooms, laboratories, libraries, and teaching material are usually freely available to student nurses.

(b) Instruction is given to student nurses by professors and instructors in medical schools, those who are accustomed to teaching and to providing systematic, thorough instruction.

(c) Respect is shown for the theoretical side of their work, and student nurses are obliged to give the same attention to their studies that the other students give.

(d) The foregoing conditions naturally operate to attract a higher grade of candidate for admission.

The letters dwell also on the value of less tangible matters, such as the facts that the nurses are entered as students in the university, graduate with the other students, receive their diplomas from the hands of the president, and catch something of the university spirit. An interesting opportunity exists here for strengthening and developing training schools and improving the education of nurses which should be fully utilized. All of the resources of the university, and not alone those of the medical department, should be freely available to student nurses, since nursing draws from many sources beyond the strictly medical and sanitary for its perfection. Valuable, however, as are these connections with university, college, or technical school, they will not alone solve the problem of education in nursing. If the connection is through the hospital of which the training school is a part, there may be certain opportunities available, certain privileges granted to the student nurses, but there is no certainty that the university hospital will differ materially from other hospitals in its relation to the training schools. There are several schools belonging to university hospitals reaping no obvious benefit from such relationship.

If, on the other hand, the training school is a department of the medical school, there may be some further advantages secured to it, but there is no guarantee that the medical school will be willing to incur any appreciable expense for the training school or accord it any real freedom for growth. This relationship is very interestingly discussed by Dr. Alfred Worcester, of Waltham. He says:

Of course it would be a step forward from the present hospital domination of the training school if the education of nurses were assumed by the medical schools which have whole control of their hospitals. But such a step would at best be only a half-way step and would entail great difficulties. It is true that the nursing profession is secondary to the medical profession in that the nurse is the doctor's executive officer. In the same way the engineer of the battleship is secondary to the captain. But from that it does not follow that the education of naval engineers should be intrusted to officers of the line. Engineers must be educated by engineers, surgeons by surgeons, and nurses by nurses—each profession in its own school, under its own separate faculty, and controlled only by the university. ("The education of nurses." *The University Record*, Chicago University, May, 1903, p. 1.)

It is the opinion of some of those who have for many years been engaged in hospital and training school work, who have given careful

study to the peculiar relationship which has been established between them, and have met in every form the difficulties due to that relationship, that the first step toward developing proper schools of nursing lies in separating them from the hospital and its control and placing them upon an independent basis. Under the present system the school has no life of its own. It is in essence simply a part of the hospital service, and it is unquestionably governed in all its important functions, not by a body concerned with their fulfillment, but by everyday hospital conditions and necessities. That a number of important hospitals are interested in their schools and kindly disposed toward their students does not greatly affect the situation. It does not insure the maintenance of any stable educational policy; it does not prevent sweeping changes in the school as the result of a change in the administrative staff of the hospital, and members of that staff who may be hostile to the education of nurses will have power to do such destructive work in the training school as may set it back for years, upon so insecure a foundation does it now stand. Mrs. Hunter Robb, writing on this subject, said:

Hospital authorities and superintendents of training schools have done to the best of their ability, and have utilized approximately to the limit the possibilities of the system under which they have had to work. The main limit is based upon the fundamental fact that from the educational standpoint the relation of the training school to the hospital work has always come first and the nurses' education has been relegated to a secondary position. In no instance has a training school for nurses been founded primarily as an educational institution; it has always been regarded as an appendage to a hospital. But until this is changed and schools for nurses are founded for the primary purpose of educating women in nursing, the hospital being utilized as the ground for gaining practical experience, we can scarcely hope for any uniformity in nursing or for the higher grade of work for the hospital or the sick. ("Affiliation of training schools for educational purposes," Mrs. Hunter Robb. Report American Federation of Nurses, 1905, p. 159.)

In an interesting and suggestive paper on the education of nurses, Dr. F. P. Denny, of Brookline, Mass., advances the same idea, pointing out the need for an educational institution which would assume the whole responsibility of the training of nurses. After showing the improvements which such schools might bring about, he says "these reforms are sure to come if the training is wholly in the control of an institution whose only object is to secure the best possible education for the nurse." ("The need of an institution for the education of nurses independent of the hospitals," by Francis P. Denny, M. D. Boston Medical and Surgical Journal, June 18, 1903, p. 658.)

An English writer (a physician), discussing this subject not long since, advocated the incorporation in England of a Royal College of Nursing, which would grant degrees in nursing just as they are granted in medicine. After briefly outlining a plan for such an organization he says: "The degrees might rightly follow the lines of the patron

profession, and a diplomaed nurse might be entitled to the degree of B. N." (bachelor of nursing). A higher diploma, he thinks, should be encouraged for those who aspired to administrative or teaching posts. "Only those," he says, "who held a recognized degree would be recognized as nurses, and the line of demarcation would be sharp and clear." ("The nurse of the future," Josiah Oldfield. *Westminster Review*, Dec., 1905, p. 661.)

But a college for nurses is not a new idea. It was included in the plans of that committee of the State Charities Aid Association which in 1874 was instrumental in establishing a training school in connection with Bellevue Hospital, New York. "As the work advances," their report reads, "we hope to establish a college for the education of nurses which will receive a charter from the State and become a recognized institution of the country."

The founders of Bellevue Training School were in a position to plan for future educational growth and development because this school, though closely connected with the hospital, was not controlled by it, but under the management of a separate board maintained largely or wholly by separate funds. The board entered into an agreement with the hospital to provide the students opportunities for definite training and experience in return for such services as they could render the sick. In the hospital they were subordinate to the organization and its system, but under the control of the school board in matters of teaching, training, and discipline.

The earlier schools, both in England and America, were established on this basis, and the very first school founded by Florence Nightingale, in 1860 in connection with St. Thomas Hospital in London, was and still is managed by a separate board, under its own endowment, and represents a distinct educational institution. The Illinois Training School, of Chicago, is a separate institution for the education of nurses, and has a large and strong board of directors. It is connected with a great municipal hospital—the Cook County Hospital—and a contract is made annually by the school to carry on the nursing in the hospital. But in the last analysis this school is really maintained by the student nurses, for whose services the hospital pays the directors of the school a stated sum per capita per day.

With one or two exceptions, however, the schools in this country have not been able to maintain a separate status, and they have one by one eventually become incorporated into the hospital. No careful study has been made of the causes of this transition, but it is probably safe to hazard a guess that the lack of sufficient endowment and the difficulty of securing funds to maintain the school were largely instrumental in bringing about the change. And hospitals were eager to secure control of the schools. The crux of the whole situation seems to lie here—education when worth anything

is costly, and no scheme of education that will fitly prepare women for the extraordinarily varied demands in nursing can be carried on without expense. The hospital knows this, but can not meet it. Society has so far not recognized it; while requiring much of the nurse in private, and of late in municipal life, it has left the entire task of educating nurses to the hospital, unmindful of the fact that the hospital is not founded for such work primarily and that it can not incorporate into its own great scheme of activities another scheme equally great but entirely different in purpose and requiring special conditions and a special government.

While hospital and training school are fundamentally interdependent, there is no more reason why the hospital should own and control the training school than the medical school. The basis of relationship should be one of close and efficient cooperation.

Dr. Henry M. Hurd, until recently superintendent of the Johns Hopkins Hospital, Baltimore, in a valuable paper on this subject says:

It is well known that no first-class school of any sort, and no form of higher education can be a profitable business enterprise; that the teaching of theology, of law, medicine, and pedagogics, or instruction in the strictly technical schools can not rest upon a commercial basis and pay its proper expenses. It should ever be borne in mind that nursing the sick is now a calling as much as law, medicine, or theology; that it enters into the life of the community to a greater extent even than these professions, and that the families of the rich equally with the poor are concerned in the proper education and training of nurses.

Medical schools must have an ample endowment to place medical education upon a proper footing and do good educational work. It is equally true that a similar endowment is necessary for the training schools for nurses. The duty is apparent; to the nurse is committed the personal care of the sick in every community; she comes into the family; she bears the responsibility and care of the family in the absence of the family physician; she represents him, replaces him, assists him, and supplements his labors by her efficiency and helpfulness. Through her efforts his labors to cure his patients are made effective. If she is imperfectly trained and unable to appreciate the higher range of her duties, she becomes a broken reed, upon which he can not lean with safety.

Then, too, in the more public duties of the nurse an adequate training is equally essential. In every city, large or small, nay, in every village or town, the hospital, with its properly arranged, well-equipped operating room, efficiently supervised by a trained nurse, has become essential, so that an accident case, or one requiring sudden surgical intervention, can be cared for as speedily and as well at the home of the patient, wherever that may be, as in the largest city clinic or the most expensive hospital in the land. The competent and thoroughly trained nurse is an all-important adjunct of every such hospital.

The nurse has also been introduced into the public school with great advantage to the public welfare. She watches over the health of the pupils; she observes the hygienic conditions of the school; she visits the home to know how the pupils live there and to give such instruction as will improve the conditions of living. In district nursing her services also require the highest grade of intelligence and training. She must become, to use Florence Nightingale's term, "a missionary of health" to families of the poor, and must preach the gospel of hygienic living and healthful surroundings.

Upon the tuberculosis nurse is placed the hardest part of the battle which is being waged against tuberculosis in every part of the country. She not only must look after the sick as a nurse, but also is responsible for the hygienic care of the sick and the instruction of the family, so that tuberculosis may not be a source of danger to the community. She must equally instruct the family and supervise the home, so that other members of the family may not, through inadvertence or ignorance, acquire the dread disease. She must see that families live healthily; that too many are not crowded into an infected room; that rooms are properly disinfected after the death or removal of a tubercular patient, and must protect the whole community from the spread of tuberculous disease.

Everywhere her presence makes for comfort in sickness, for the minimization of the loss to the community and the state which disease, suffering, and death entail, for the prevention of disease, and for the social uplift which is the hope of the nation with its conglomerate population and racial diversities and animosities. More surely than education alone, more strongly than the ties of religion, more firmly than self-interest and commercialism, this form of service will bind society together and assist each class in the effort to lighten the burdens of the other.

When such important duties devolve upon the trained nurse it is short-sighted in the extreme and contrary to good policy to leave the establishment and maintenance of training schools to private initiative, where too often the governing motive must be to get public or private hospitals supplied with nurses at the lowest cost to the institution.

Is it not the duty of the public, rather for its own welfare, to see that nurses' training schools are adequately endowed, so that young women of character and ability can be induced to come to them, and so that when they come to such training schools they may be properly instructed for the discharge of duties which take hold of the health and welfare of the entire community?

("Shall training schools for nursing be endowed?" Dr. Henry M. Hurd. *The American Journal of Nursing*, Sept., 1906, pp. 849-952.)

Whether the freedom of the training school is brought about by means of endowments or by State or municipal aid does not matter. The thing to be secured is a separate government for the training school. The actual relation of the school to the hospital need not greatly change in certain ways, and student nurses on duty would always be subject to the administrative régime. The school buildings should remain beside the hospital. But the endowment should provide such extensions and additions to those buildings as will make them schools in the accepted sense of that word—lecture rooms, laboratories, teaching material—every equipment needed for the required academic and scientific work should be supplied, and nothing should stand in the way of the student in securing proper foundations of this nature for her later work in the hospital. She should, however, pay for her tuition and probably for a part of the time for her board.

The faculty should determine the requirements for admission, length of course, subjects to be taught, in theory and in practice, diplomas and degrees, vacations, salaries for staff, and other similar matters, and should make all arrangements and adjustments with the hospital.

The board, the controlling body of the school, should be inspired by the fullest appreciation of the social importance of the nurse's work and should have a clear understanding of the scope and extent of her professional field and of the way in which it is developing.

It should be clearly understood that in insisting upon the necessity for a sounder scientific foundation and a fuller knowledge of the principles and the general theory underlying and relative to the art of nursing, there is no thought of minimizing in any degree the importance of the practical training and the value of experience which the hospital provides, nor of reducing it in any way which might tend to render it less serviceable for its purpose. This practical work, however, in the hospital or out of it, always must suffer when the theoretical foundations are weak. No one with any real knowledge of the situation could underestimate the value of the opportunity which the hospital affords the student, of actually living and working among the sick under the supervision and instruction of a staff of expert nurses, whose methods can be studied at close range. In no other way can the student observe and study the various diseases, become familiar with their symptoms, stages, complications, and fluctuations, and watch the effect of treatment and care of them. The steady industry and the ordered life and the increasing responsibility in the hospital supply conditions under which essential qualities of character and habits of thought and action are developed; decision, self-control, fortitude, resourcefulness, and judgment are in some measure built up in the student who becomes a member of a highly-organized staff controlled by a unique and wonderful discipline, and guided by traditions of courage, devotion to duty, and self-sacrificing service for others. So far from undervaluing that which the hospital can give, it is the conviction of the writer that these magnificent opportunities should only be given to students thoroughly prepared to take the fullest possible advantage of them; they should be properly utilized and wisely directed.

STATE REGISTRATION.

ENACTMENTS.

North Carolina, in 1903, was the first State to present a bill and secure a law providing for the State registration of nurses. Within the eight years that have elapsed since that date, 31 States have succeeded in obtaining such laws. In the 5 States of Vermont, Tennessee, Idaho, Oregon, and Wisconsin these laws have been passed in 1911. In New Jersey, where a defective law was enacted in 1903, the State society of nurses is struggling against considerable opposition to secure the passage of a new bill which shall make some definite requirement in the way of educational and other standards for nurses.

A careful study of the laws which have so far been enacted in this country will serve to show that there is still much work to be done, and that as yet the foundations only have been laid upon which may be built bulwarks of suitable strength for the adequate defense of educational standards in nursing. Take that most important feature, preliminary education, and it will be seen that from the standpoint of statutory requirements practically no definite standards exist, since in almost every instance the requirement made is qualified by the term "or an equivalent," and 18 of the 31 enactments make no educational requirement whatever; 6 States (North Carolina, Maryland, Indiana, West Virginia, Oklahoma, and Delaware) ask for a high-school course or "its equivalent;" 2 States (Minnesota and Nebraska) call for high-school entrance examinations; 4 States (California, Missouri, Michigan, and Oklahoma) for a common-school course, or equivalent, and the remaining 18 States leave the matter untouched, to be determined by the examining board or others. What may be accepted as properly constituting a just equivalent of the full high-school course, of one or two years of high-school work, or of a completed grammar-school course, must apparently under present conditions be left to the superintendents and principals of training schools in different States to determine. This would be under any circumstances a difficult and perplexing problem, but under the present system of training-school administration it is a well-nigh hopeless one in the majority of instances. The head of the training school is now unquestionably obliged to give herself great latitude in this matter. She must often interpret this equivalent according neither to the letter nor to the spirit, but in accordance with the requirements of the hospital. This in the last analysis controls more or less arbitrarily the question of preliminary standards of education, and herein lies the reason for the consistent opposition which nurses have met and are likely to meet on this point.

As to the type of hospital in which the practical training may be given, the laws provide for a considerable degree of variety. Several States provide that the school must be connected with a general hospital, which may be further qualified as "registered," "chartered," "approved," or "in good standing." In various other States the training may be in sanatoria, State hospitals, or special hospitals, usually with the provision that a certain additional specified time, which may be from six months to one year, shall be spent in a general hospital. Three States (New Jersey, Pennsylvania, and Massachusetts) make no mention of where the training is to be received, thus leaving the matter entirely in the hands of the examining board.

The occasional use of the word "reputable" suggests problems, as, for instance, when the law requires that the training must have been received in a "reputable hospital." This is practically equivalent to

assuming that any hospital which can not actually be proved to be disreputable should be accepted as suitable ground for the education and training of nurses without reference to the character and scope of its work.

In the several laws in which mention is made of the subjects on which the applicant will be examined they are very similar, and include anatomy and physiology, hygiene, materia medica, dietetics or invalid cookery, and practical nursing in the care of medical, surgical, and obstetrical patients.

Notwithstanding, however, the very moderate requirements of these laws as a whole, they have apparently been the means of accomplishing definite, tangible results, and while the indirect influence which they have exerted can not be readily measured, it can be clearly recognized.

It appears from the statements of officers of various State societies that a number of small, private, or special hospitals or sanatoria which had been maintaining schools have been sufficiently affected by the laws to lead them either to seek suitable affiliations or to close the schools and carry on their work by means of a salaried nursing staff.

The effect of the laws upon the larger schools has been salutary, and in a very considerable degree the improvements in curricula noted during the past few years, the increase in teaching equipment, the better living conditions for students are due to the direct and indirect influence of the laws. Members who have served on examining boards for several years have had ample time to note the progressive improvement in successive groups of nurses from the same schools as they have presented themselves from year to year for examination, and nurses themselves are recognizing the fact that a registered nurse has a status in the community publicly and professionally which the unregistered nurse can not ordinarily hope to attain. In a number of the reports from training schools recently received by the Bureau of Education, statements were made that certain improvements and additions had been brought about to enable nurses to qualify for registration.

The opposition to the principle of State registration for nurses and to the enactment of laws providing for it has almost uniformly come from those who control or have some interest in private hospitals or sanatoria in which schools are established to secure nursing without expense, or from the short-term schools in which the pupil performs somewhat the same service in the private practice of one or more physicians. The opposition, however, also comes to some extent from general hospitals dependent upon their training schools and unwilling to support measures which will result in restricting the number of available qualified candidates for admission.

A somewhat careful study of the opposition which has been met both in this country and abroad shows how largely commercial it has been and is in its nature, and to what lengths the exploitation of pupil nurses has been carried. There could indeed be no possible rational objection urged against a procedure the principle of which is recognized as sound in all other professions or vocations in which scientific knowledge and technical skill in definite degree are essential for public safety.

EXAMINING BOARDS.

It has been pointed out that in a few States the laws are so ill-defined, so low in their requirements, or so lacking altogether in this respect, that it seems doubtful if anything can be accomplished through them, since they appear merely to legalize low standards. It is clear that their value as a means of public protection and of uplifting nursing education must depend to an unusual degree upon the board of examiners, upon whom, in the absence of statutory requirements, the responsibility of determining all standards, as well as of interpreting and enforcing them, must rest. Whatever standards in nursing are set up in such States must be by their action, and a weak, inefficient, or timid board will have little effect upon training schools and their work.

An immense responsibility, under any conditions, rests upon these examining boards. They are the agencies through which the laws must work, and while no board, however zealous, able, and energetic can make a poor school give good training, it can be of great and constant service in helping schools to discover their own deficiencies and in making it difficult, if not impossible, for those training schools which are not willing to meet the very modest requirements which the law now makes to continue in operation and to attract candidates.

There is hardly any duty falling upon the State society of nurses of more importance than the nomination from its membership of candidates for appointment to the examining boards. These boards should be composed of the best representatives of the profession. They should be women of liberal education, or as near it as can be found, highly skilled in nursing, broad-minded, courageous, vigorous, and alert. Those who are, or have recently been, teachers, if qualified in other ways make excellent examiners. The board should be carefully organized, with its powers accurately defined. It should have suitable headquarters, properly kept records, and enough clerical assistance to do its work. It should be in a position to know definitely the character and the amount of work which each training school in the State is doing, and it should have a clear idea of the hospitals with which these schools are connected, their standing in the community of which they are a part, their resources, and the scope of their

work. The board should have the power of obtaining whatever information it may need, and it should be ready to publish when advisable such statements, suggestions, or instructions as will enable training schools to strengthen themselves in those departments which are shown to be weak. The more carefully one considers the work of the examining board, the more certain does it seem that they have it in their power to do much of that constructive, unifying work for our training schools which is so urgently needed. All work of this nature will of necessity be slow, since in very few of our States are the laws mandatory. In the majority they are permissive only, and in those States anyone is permitted to nurse and to call herself a nurse. The requirement of the law is that she shall not call herself a *registered nurse* or assume a similar title; and even in those States where mandatory laws have fortunately been secured their value will be proportionate to the degree of vigor with which the laws are enforced.

Thus at every turn we are brought back to the examining board and to face squarely its great responsibilities and powers. As yet these boards are working largely upon independent lines, but there is little doubt that they will more and more confer together upon the many problems in nursing education which are of common import, which must be solved with reference to general good and uniform standards, rather than to the special conditions of a special locality.

TRAINING SCHOOL INSPECTION.

For adequate supervision of this branch of woman's education in any State, it will be necessary to develop further the idea of systematic and continuous inspection and supervision of hospitals and training schools. In New York this principle was adopted several years ago, largely owing to the energy and persistence of Miss Sophia Palmer, editor of the *Journal of Nursing*. The inspector is appointed by the regents, and her work is and has been of incalculable value, recognized as such by the nursing profession throughout the State. In the present stage of nursing education, where the relationships between the training school and the hospital, the physician and the public, present issues of a complicated and confused nature, often difficult of adjustment, there is urgent need of the most patient, careful investigation, study, and thought. Inspectors should be selected with the utmost care from those who have had exceptional education and training and who are recognized as experts in training-school work.

There are now regular inspectors in New York, in Illinois, and in Washington. In Iowa a member of the examining board is appointed to act in this capacity for a certain term, and this apparently holds true of New Hampshire in a sense. In several States members of

the examining boards do informal inspection, through their president, secretary, or other selected members. In the American Journal of Nursing for March, 1911, the province of the inspector is thus editorially discussed:

As the work develops the term inspector seems to be a misnomer, and she is vastly more than an inspector of buildings, equipment, and methods. She not only reports conditions as she finds them, but her work is constructive and advisory, and through her influence chaotic conditions are reduced to order, and affiliations are provided for, which, without the authority and guidance of a State official from the outside, would be impossible to bring about. That she should be not too young, a type of woman who commands not only respect but confidence, and that she herself should have battled with all of the problems of the training school, goes without question. Otherwise she can be little more than a figurehead in the vital work of this period.

The laws for State registration having been brought into effect through the influence of nursing organizations, such organizations have a moral right, at least, to insist that they shall be administered in a manner satisfactory to the highest nursing ideals, and when the appointments of such State officials are made without regard to a proper fitness, whether moral or professional, protest should be vigorous and continued until efficient nurses are installed. * * *

One of the things that nurses must look to in the administration of laws for State registration is the proper recognition by the public of their official representatives, and the only way in which such recognition can be brought about is for the whole nursing body to concede to such officers confidence, loyalty, and support; also such liberal compensation to inspectors and secretaries that as they go about in the performance of duty they may be able to afford the outward manifestations that custom calls for in the person occupying a dignified official position.

Some important features of State laws for registration of nurses.

States.	Year enacted.	Mandatory or permissive.	Preliminary education required.	Years in course.	Hospital training required.	Composition of examining board.	Title.	Remarks.
1 North Carolina.....	1903	P.	High school graduate or equivalent.	3	General hospital.....	3 nurses, 2 physicians..	R. N..	
2 New Jersey.....	1903	P.	None.	2	No requirement.....	No board.....	R. N..	Power to issue licenses vested in county clerks.
3 New York.....	1903	P.	None.	2	Hospital or sanitarium.....	Nurses.....	R. N..	
4 Virginia.....	1903	M.	None.	2	General hospital.....	Nurses.....	R. N..	
5 Maryland.....	1904	P.	None.	3	General hospital.....	Nurses.....	R. N..	
6 Indiana.....	1905	M.		2	General hospital.....	Nurses.....	R. N..	
7 California.....	1905	P.	Grammar school or equivalent.	3	General hospital.....	No board.....	R. N..	Power vested in regents of University of California.
8 Colorado.....	1905	M.	None.	3	General hospital or sanitarium.....	Nurses.....	R. N..	
9 Connecticut.....	1905	P.	None.	2	(i)	Nurses.....	R. N..	
10 New Hampshire.....	1907	P.	None.	2	(i)	Nurses.....	R. N..	
11 District of Columbia.....	1907	P.	None.	2	General hospital.....	2 physicians, 2 nurses, secretary State board of health.	R. N..	Decisions of State board of health are final.
12 Iowa.....	1907	P.	None.	2	General hospital.....	Physicians.....	R. N..	Only voters eligible to office.
13 West Virginia.....	1907	P.	High school graduate or equivalent.	2	General hospital.....	4 nurses, 1 physician..	R. N..	2 or more years
14 Minnesota.....	1907	P.	High school entrance or equivalent.	3	General hospital.....	Nurses.....	R. N..	3 years' experience
15 Illinois.....	1907	P.	None.	3	General hospital.....	Nurses.....	R. N..	
16 Georgia.....	1907	P.	None.	2	Hospital or sanitarium.....	Nurses.....	R. N..	
17 Wyoming.....	1909	M.	None.	2	General hospital.....	Nurses.....	R. N..	
18 Washington.....	1909	M.	None.	2	General hospital or sanitarium.....	Nurses.....	R. N..	
19 Texas.....	1909	P.	None.	2	General hospital.....	Nurses.....	R. N..	
20 Oklahoma.....	1909	M.	High school graduate (1914) or equivalent.	2	General hospital or sanitarium.....	Nurses.....	R. N..	Called board of secretaries, who assist and advise State board of health.
21 Nebraska.....	1909	P.	High school entrance or equivalent.	2	General hospital or sanitarium.....	Nurses.....	R. N..	

¹ Amended in 1907.² Medical, surgical, or obstetrical cases in public or private hospital.³ Hospitals registered by regent State board of medical examiners.⁴ Or 3 years equivalent in special hospitals.⁵ Or special hospital with 6 months' additional general training.

Some important features of State laws for registration of nurses—Continued.

State.	Year enacted.	Mandatory or permissive.	Preliminary education required.	Years in course.	Hospital training required.	Composition of examining board.	Title.	Remarks.
22 Delaware.....	1909	P.	High school graduate or equivalent.	3	General hospital.....	3 nurses, 3 physicians	R. N..	Physicians representing two leading schools of medicine.
23 Pennsylvania.....	1909	P.	None.....	2	Surgical and medical nursing.	3 physicians, 3 nurses..	R. N..	Physicians must also be hospital officials.
24 Missouri.....	1909	P.	Grammar school or equivalent.	2	General hospital ¹	Nurses.....	R. N..	
25 Michigan.....	1909	P.	Grammar school or equivalent.	2	General hospital ¹	3 nurses, 1 physician..	R. N..	
26 Massachusetts.....	1910	P.	None.....	2	No requirement.....	3	R. N..	Secretary of State board of medical registration, also secretary of board of nurse registration.
27 Vermont.....	1911	P.	None.....	2	Any hospital.....	2 physicians, 1 nurse..	R. N..	If hospital having -3 years' nursing
28 Tennessee.....	1911	M.	None.....	2	Hospital or sanitarium	3 nurses.....	R. N..	of nurses society
29 Idaho.....	1911	P.	None.....	2	General hospital approved by board.	2 nurses, 1 physician..	R. N..	No Association of nurses in practice.
30 Oregon.....	1911	P.	None.....	2	General hospital (if reputable).	3 nurses.....	R. N..	Association of Nurses.
31 Wisconsin ²	1911							

¹ Or equivalent in sanitarium, special, or one or more hospitals.² Three years after 1914.³ Details not yet received.

TABLE 1.—Comparative statistics of nurse training schools.

Year.	Schools.	Nurse pupils.	Capacity of hospitals (beds).	Graduates.
1911 ¹	1,121	29,805	194,236	7,720
1910	1,129	32,636	214,597	8,140
1900	432	11,164	84,227	3,456
1890	35	1,552	.....	471
1880	15	323	.....	157

¹ Includes the statistics of three schools in Porto Rico.

TABLE 2.—Summary of statistics of schools for training of professional nurses, 1910-11.

States.	Class A, excluding schools connected with hospitals for the treatment of nervous, mental diseases, etc.					Class B, including schools for the treatment of nervous, mental diseases, etc.				
	Schools.	Students.	Graduates.	Capacity (beds).	Average daily number of patients.	Schools.	Students.	Graduates.	Capacity (beds).	Average daily number of patients.
United States.....	1,048	26,511	6,971	101,708	53,232	70	3,251	738	92,378	¹ 68,856
North Atlantic Division.....	412	11,707	3,243	46,782	29,537	40	1,828	470	58,096	36,183
South Atlantic Division.....	131	2,628	627	9,519	4,015	5	208	43	6,925	5,124
South Central Division.....	72	1,428	336	7,081	2,295	2	48	15	2,700	2,660
North Central Division.....	330	7,911	2,073	27,881	12,463	23	1,167	210	24,657	24,889
Western Division.....	103	2,837	692	10,445	4,922	.....	.....	.....	.....	.....
North Atlantic Division:										
Maine.....	11	319	72	746	496	2	48	13	1,500	1,390
New Hampshire.....	14	202	41	503	276	1	60	15	1,114	.....
Vermont.....	10	167	48	390	211	1	17	5	595	.....
Massachusetts.....	70	1,933	554	6,810	3,058	9	581	136	10,674	5,772
Rhode Island.....	7	261	67	735	521	1	130	15	200	.....
Connecticut.....	17	488	117	1,936	1,272	2	37	14	3,350	.....
New York.....	132	4,147	1,212	18,739	13,479	13	456	170	28,811	23,876
New Jersey.....	29	700	196	2,504	1,547	4	137	35	5,215	3,556
Pennsylvania.....	122	3,490	936	14,419	8,677	7	362	67	6,637	1,589
South Atlantic Division:										
Delaware.....	2	34	11	137	80	.....	.....	.....	.....	.....
Maryland.....	20	648	149	2,657	1,612	2	47	18	2,978	2,887
District of Columbia.....	10	426	131	1,545	566	1	33	15	1,190	1,130
Virginia.....	21	399	110	1,433	384	1	7	3	1,182	1,107
West Virginia.....	16	215	48	916	273	.....	.....	.....	.....	.....
North Carolina.....	25	311	63	1,019	231	.....	.....	.....	.....	.....
South Carolina.....	8	135	37	439	300	1	121	7	1,575	.....
Georgia.....	24	407	66	1,158	467	.....	.....	.....	.....	.....
Florida.....	5	53	12	215	102	.....	.....	.....	.....	.....
South Central Division:										
Kentucky.....	13	190	57	775	134	1	17	3	1,200	1,150
Tennessee.....	8	142	43	502	229	.....	.....	.....	.....	.....
Alabama.....	6	158	32	462	115	1	31	12	1,500	1,510
Mississippi.....	6	81	20	476	135	.....	.....	.....	.....	.....
Louisiana.....	7	280	75	1,706	311	.....	.....	.....	.....	.....
Texas.....	19	377	72	2,124	870	.....	.....	.....	.....	.....
Arkansas.....	7	148	31	800	421	.....	.....	.....	.....	.....
Oklahoma.....	6	52	6	236	80	.....	.....	.....	.....	.....
North Central Division:										
Ohio.....	51	1,151	324	4,546	2,051	3	131	46	4,925	4,831
Indiana.....	28	488	135	1,449	885	.....	.....	.....	.....	.....
Illinois.....	67	2,119	563	7,382	4,231	5	472	38	5,370	6,103
Michigan.....	39	997	266	3,208	1,161	3	157	34	4,210	3,316
Wisconsin.....	16	380	109	1,157	632	.....	.....	.....	.....	.....
Minnesota.....	27	672	178	2,531	767	3	161	40	2,710	3,735
Iowa.....	30	686	151	2,073	629	5	138	38	3,720	3,340
Missouri.....	31	763	194	3,114	1,444	.....	.....	.....	.....	.....
North Dakota.....	5	65	19	232	13	.....	.....	.....	.....	.....
South Dakota.....	7	99	27	317	55	.....	.....	.....	.....	.....
Nebraska.....	17	334	68	1,326	335	2	37	6	1,042	914
Kansas.....	12	157	39	546	260	2	71	8	2,680	2,650
Western Division:										
Montana.....	6	126	35	665	180	.....	.....	.....	.....	.....
Wyoming.....	3	40	14	210	113	.....	.....	.....	.....	.....
Colorado.....	17	429	98	1,808	875	.....	.....	.....	.....	.....
New Mexico.....	1	14	6	100	60	.....	.....	.....	.....	.....
Arizona.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Utah.....	4	118	27	425	273	.....	.....	.....	.....	.....
Nevada.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Idaho.....	2	29	6	130	50	.....	.....	.....	.....	.....
Washington.....	20	365	98	1,288	474	.....	.....	.....	.....	.....
Oregon.....	4	186	50	750	40	.....	.....	.....	.....	.....
California.....	46	1,530	358	5,069	2,857	.....	.....	.....	.....	.....

¹ In so far as reported to this office.

TABLE 3.—Statistics of schools for the training of professional nurses for the school year 1910-11—Class A.

[Class A excludes schools connected with hospitals for the treatment of nervous and mental diseases, etc.]

Location.	Name of school or hospital with which it is connected.	Superintendent of nurses.	Students enrolled.	Years in course.	Graduates in 1911.	Capacity (beds).	Average daily number of patients.	Are students sent into families during night hours on duty.	Daily number of hours on duty.	Requirements for admission.	
										Education.	Age.
1			4	5	4	7	8	9	10	11	12
ALABAMA.											
1	Birmingham.....	Miss O. B. Holt.....	22	3	4	30	30	Yes	10	C. S.	18-30
2	do.....	Sister Chrysostom.....	35	3	6	175	60	Yes	10	C. S.	18-30
3	Mobile.....	Sister Stephanie.....	26	3	3	80	80	Yes	10	C. S.	18-30
4	Montgomery.....	Sister Mary Sienna.....	27	3	2	60	60	Yes	7	2 years, non-res.	18
5	Normal.....	Pearl L. Younger.....	12	3	2	22	22	Yes	7	2 years, non-res.	18
6	Tuskegee.....	John A. Kenney, M. D.....	36	2	12	45	20	Yes	8	8th grade.....	18-35
ARKANSAS.											
7	Fort Smith.....	.....	15	2	2	100	46	No	10	1 year H. S.	18-30
8	Hot Springs.....	.....	6	2	2	40	40	No	10	H. S.	25
9	do.....	.....	17	2	8	75	25	Yes	10	C. S.	20
10	Little Rock.....	.....	25	2	6	35	35	Yes	9	8th grade.....	18
11	do.....	M. D.....	27	2 1/2	1	300	160	Yes	9	do.....	20
12	do.....	Sister Bernard.....	16	2	10	260	200	Yes	8	do.....	20
13	do.....	.....	40	2	10	260	200	Yes	8	do.....	20
CALIFORNIA.											
14	Eureka.....	Ida M. Mason.....	10	2	5	45	45	No	10	8th grade.....	20-35
15	Fresno.....	Ellen Eunice Garland.....	20	2	6	83	83	No	10	9th grade.....	19
16	Glendale.....	Belle Wood Constock, M. D.....	35	2 1/2	16	60	40	Yes	12	1 year H. S.	21-35
17	Los Angeles.....	Anne Armstrong Williamson.....	27	2	29	150	108	No	12	H. S.	20-35
18	do.....	Gertrude E. Constant.....	42	2	4	62	46	No	9	do.....	20-35
19	do.....	Charles H. Whitman, M. D.....	68	2	31	600	600	No	24	do.....	20-35
20	do.....	Rose M. McDonald.....	84	2	8	78	45	No	8	1 year H. S.	21
21	do.....	Helen D. Jackson.....	60	2	12	100	70	No	8	H. S.	21-30
22	do.....	Sister Mary Ann Keating.....	45	2	12	200	35	No	9	8th grade.....	21-35
23	do.....	Lillian Tracy.....	30	2	6	80	35	No	9	H. S.	20-32
24	Oakland.....	Minnehaha Taylor.....	30	2	3	35	28	No	9	do.....	20-30
25	do.....	Janette E. Jensen.....	13	2	9	120	53	No	8 1/2	8th grade.....	21

STATISTICS OF NURSE TRAINING SCHOOLS, 1910-11.

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[illegible]

Abbreviations used: C. B. = Common school. H. B. = High school.

* Statistics of 1910.

EDUCATIONAL STATUS OF NURSING.

TABLE 3.—Statistics of schools for the training of professional nurses for the school year 1910-11—Class A—Continued.

Location.	Name of school or hospital with which it is connected.	Superintendent of nurses.	Students enrolled.	Years in course.	Graduates in 1911.	Capacity (beds).	Average daily number of patients.	Are students sent into families during training?	Daily number of hours on duty.	Requirements for admission.	
										Education. ¹	Age.
1	2	3	4	5	6	7	8	9	10	11	12
COLORADO—continued.											
72	Loveland.	Dr. W. B. Sutherland's Private Hospital	6	2	2	26	8	Yes.	12	H. S.	21
73	Pueblo.	Minnequa Hospital.	27	2	7	150	110	No.	9	8th grade.	19-35
74	do.	St. Mary's Hospital.	12	2	9	128	45	Yes.	8	8th grade.	20-31
75	Trinidad.	St. Raphael's Hospital.	17	2	2	150					
CONNECTICUT.											
76	Bridgesport.	Elizabeth P. Oliver, R. N.	45	2½	12	175	115	Yes.	9	H. S.	21-35
77	do.	Sister M. Alice Gannon.	28	2	5	120	100	Yes.	8	do.	21
78	Danbury.	Suzanne W. Cutler.	20	2½	3	60	40	Yes.	12	do.	20-30
79	Harford.	Lauder Sutherland.	90	2	18	400	315	No.	6	1 Year H. S.	20-30
80	do.		61	2½	10	250	200	Yes.	10	8th grade.	20-35
81	Meriden.		12	2½	21	54	28	No.	10	H. S.	18
82	Middletown.		14	2½	4	70	38	No.	8½	8th grade.	21
83	New Britain.		23	2½	5	60	40	No.	10	H. S.	20-32
84	New Haven.		24	2	2	90	67	No.	9	do.	22-35
85	do.		24	2	26	225	158	Yes.	8½	do.	21
86	New London.		24	2	2	140					
87	do.		16	2	6	82	23	No.	9	1 Year H. S.	22-35
88	Norfolk.		10	2	6	40	20	No.	10	H. S.	21-35
89	Norwich.	May L. Love, R. N.	12	2½	4	42	42	No.	11	do.	21-35
90	Stamford.	Edith M. Wilson.	7	2½	6	32	32	Yes.	11	do.	20-30
91	Waterbury.	Mary A. Andrews.	20	2½	2	55	40	No.	9	8th grade.	20
92	Winsted.	Amy J. Robinson.	8	2	2	36	20	No.	10½	H. S.	20
DELAWARE.											
93	Wilmington.	Jennette F. Duncan.	20	2	6	67	50	No.	9	C. S.	18
94	do.	Alma H. Turner.	14	2	5	70	30	Yes.	10	do.	20

STATISTICS OF NURSE TRAINING SCHOOLS, 1910-11.

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DISTRICT OF COLUMBIA.		Name of the	Margaret P. Friedman	21	3	15	200	165	No.	10	do	20-25
96	Washington	do	do	30	3	4	108	161	No.	9	H. S.	21
97	do	do	do	40	3	12	278	161	No.	8	H. S.	21
98	do	do	do	45	3	17	262	130	No.	8	H. S.	21
99	do	do	R. N.	34	2	4	104	110	No.	9	8th grade	19-20
100	do	do	do	30	2	14	104	110	No.	9	8th grade	19-20
101	do	do	do	27	2	4	85	110	No.	9	8th grade	19-20
102	do	do	do	46	3	10	310	54	Rarely	8	H. S.	20
103	do	School of	N	120	24	30	75	54	Rarely	8	H. S.	20
FLORIDA.												
104	Gainesville	Sanitarium	Miss N. F. Swan	4	1	35	35	17	Yes	8-10	do	12
105	Jacksonville	do	Pauline B. Pleasant	17	2	6	36	25	No.	94	C. S.	20-25
106	do	do	Mary A. Baker, R. N.	19	24	6	65	35	No.	9	do	18-21
107	Panama	do	Frances Mann	3	2	19	19	25	Yes	8	C. S.	21
108	St. Augustine	Hospital	S. G. Wooley, M. D.	10	2	60	60	25	Yes	8	C. S.	21
GEORGIA.												
109	Atlanta	do	do	10	3	3	30	13	No.	8	8th grade	19-20
110	do	do	do	10	3	3	22	18	No.	10	H. S.	20
111	do	do	do	27	3	6	125	10	Yes	9	8th grade	18
112	do	do	do	22	3	4	10	75	No.	9	H. S.	19-20
113	do	do	do	60	3	4	30	2	No.	8	8th grade	20
114	do	do	do	21	2	7	75	40	No.	84	H. S.	18
115	do	do	do	45	3	9	60	10	No.	8	do	15
116	do	do	do	24	3	13	70	10	No.	8	1 year H. S.	21
117	Athens	do	N	22	2	4	60	10	No.	84	C. S.	18-25
118	Augusta	do	do	12	2	1	36	15	Yes	12	H. S.	21-25
119	do	do	do	2	2	1	30	15	Yes	12	do	20
120	Brunswick	do	do	8	3	2	75	45	No.	74	do	21
121	Griffin	do	do	15	3	2	35	25	No.	113	8th grade	21
122	La Grange	do	do	10	3	1	50	35	No.	7	H. S.	18
123	Macon	do	do	18	3	3	65	40	No.	8	C. S.	21-25
124	Savannah	do	do	15	3	1	100	60	No.	9	do	20
125	Savannah	do	do	15	3	3	60	40	No.	10	H. S.	21-25
126	do	do	do	15	3	3	15	15	No.	10	H. S.	21-25
127	do	do	do	7	3	1	50	35	No.	7	H. S.	18
128	do	do	do	15	3	3	65	40	No.	8	C. S.	21-25
129	do	do	do	15	3	1	100	60	No.	9	do	20
130	do	do	do	15	3	3	60	40	No.	10	H. S.	21-25
131	do	do	do	15	3	3	15	15	No.	10	H. S.	21-25
132	Valdosta	do	do	7	3	1	50	35	No.	7	H. S.	18
IDAHO.												
133	Boise	St. Luke's Hospital	Lillian Long	21	3	6	70	50	No.	No.	2 years H. S.	21
134	Lawton	St. Joseph's Hospital	Senior Mary Borgia	8	3	60	60	60	No.	No.	H. S.	21

Abbreviations used: C. S.—Common School. H. S.—High School.

* Statistic of 1910.

TABLE 3.—Statistics of schools for the training of professional nurses for the school year 1910-11—Class A—Continued.

Location.	Name of school or hospital with which it is connected.	Superintendent of nurses.	Students enrolled.	Years in course.	Graduates in 1911.	Capacity (beds).	Average daily number of patients.	Are students sent into families during training?	Daily number of hours on duty.	Requirements for admission.	
										Education. ¹	Age.
1	2	3	4	5	6	7	8	9	10	11	12
ILLINOIS.											
135	Aurora.	Nettie B. Jordan, R. N.	10	24		26	20	No.	9	8th grade.	20
136	Camden.	Harriet C. Peck	8	3		27	13	No.	9	1 year H. S.	20
137	Champaign.	Mrs. Margaret Vilew	15	3	4	45	22	No.	10	H. S.	20-30
138	Chicago.	R. N.	95	3	18	200	170	No.	9	8th grade.	21
139	do.		35	3	14	40	60	No.	84	H. S.	21
140	do.		28	3	18	78	60	No.	9	C. S.	21
141	do.		15	3	3	50	35	No.	10	C. S.	18-30
142	do.		10	1	3	20	15	Rarely.	10	1 year H. S.	20-35
143	do.		40	3	6	75	80	No.	10	1 year H. S.	20-35
144	do.		26	3	6	35	35	No.	9	1 year H. S.	20-35
145	do.		190	3	48	1,300	1,500	No.	9	H. S.	20
146	do.		39	3	10	100	90	No.	10	H. S.	20
147	do.		35	3	8	70	35	No.	9	2 years H. S.	20-35
148	do.		20	3	8	45	40	No.	10	1 year H. S.	20
149	do.		29	3	8	45	40	No.	9	C. S.	20
150	do.		25	3	6	40	60	No.	9	C. S.	20
151	do.		20	3	6	40	60	No.	9	C. S.	20
152	do.		44	3	6	112	60	No.	94	C. S.	20
153	do.		29	3	17	40	40	No.	10	1 year H. S.	20
154	do.		11	3	3	60	18	No.	9	H. S.	20
155	do.		11	3	7	30	50	No.	9	H. S.	20
156	do.		11	3	3	30	15	No.	9	2 years H. S.	21-35
157	do.	Sister Mary Rita, R. N.	100	3	37	400	300	No.	68	H. S.	21-35
158	do.	Deaconess Maternity Hospital.	25	3	6	180	75	Rarely.	12	C. S.	18
159	do.		25	3	6	180	75	Rarely.	12	C. S.	18
160	do.	Bella Olsen	20	3	10	45	35	No.	9	C. S.	20-35
161	do.	Ellen C. Olsen, R. N.	20	3	7	70	70	No.	9	2 years H. S.	20-35
162	do.	Clara Gray, R. N.	4	3	1	60	25	No.	8	C. S.	20-35
163	do.	M. Helena McMillan, R. N.	110	3	25	200	154	No.	8	H. S.	20-30
164	do.	Jeanette S. Lyon	31	3	9	65	35	No.	54	do	20-27
165	do.	Sidney K. Appel, R. N.	24	3	1	50	39	No.	24	2 years H. S.	20

STATISTICS OF NURSE TRAINING SCHOOLS, 1910-11.

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[illegible]

Abbreviations used: C. S. = Common school. H. S. = High school.

• Budget of 1910.

TABLE 3.—Statistics of schools for the training of professional nurses for the school year 1910-11—Class A—Continued.

Location.	Name of school or hospital with which it is connected.	Superintendent of nurses.	Students enrolled.	Years in course.	Graduates in 1911.	Capacity (beds).	Average daily number of patients.	Are students sent into families for training?	Daily number of hours on duty.	Requirements for admission.	
										Education. ¹	Age.
1	2	3	4	5	6	7	8	9	10	11	12
INDIANA—continued.											
214	Indianapolis.		37	3	11	135	5	Yes.	8	8th grade.	20
215	Jeffersonville.		15	5	1	12	25	No.	9	H. S.	21-25
216	La Fayette.		18	15	1	45	25	Yes.	10	8th grade.	20-25
217	do.		6	4	1	10	4	Yes.	9	H. S.	19-25
218	do.		10	1	1	10	10	Yes.	12	C. S.	19
219	Lebanon.		3	2	1	20	6	Yes.	9	do.	19-21
220	Madison.		10	2	1	20	18	Yes.	9	8th grade.	19
221	Marion.		3	2	1	22	16	No.	9	H. S.	20
222	Muncie.		14	3	2	20	35	No.	9	do.	19
223	Richmond.		20	3	2	50	30	Rarely.	9	do.	20
224	South Bend.		20	3	2	25	25	No.	9	do.	21-25
225	do.		20	3	2	25	25	No.	9	C. S.	20-25
226	Terre Haute.		20	3	2	60	60	Yes.	10	H. S.	20-25
227	Valparaiso.		10	24	4	25	12	Yes.	10	do.	20-21
228	Vincennes.	Minnie E. Haman.	6	2	2	20	12	Yes.	10	do.	21
IOWA.											
229	Boone.		8	3	3	20	10	Yes.	8	H. S.	21-25
230	Burlington.		22	3	3	65	45	Yes.	10	8th grade.	20
231	Cedar Rapids.		20	6	2	62	62	No.	10	8th grade.	20
232	do.		25	6	2	62	62	No.	10	8th grade.	20
233	Clinton.		21	6	4	28	40	No.	8	H. S.	18
234	do.		19	3	4	50	50	No.	9	do.	20
235	do.		23	3	4	55	55	No.	12	do.	21-20
236	do.		25	3	10	150	75	Yes.	9	8th grade.	20
237	do.		30	3	7	100	100	No.	10	H. S.	21-25
238	Davenport.		15	3	4	45	25	No.	10	do.	21-25
239	do.		65	3	10	145	110	No.	9	1 year H. S.	19-25
240	Des Moines.		45	3	10	100	90	No.	9	8th grade.	19-25
241	do.		45	3	10	100	90	No.	9	1 year H. S.	20-20
242	Dubuque.		24	7	7	50	30	No.	10	C. S.	19-20
243	do.		40	3	4	220	220	No.	10	do.	19-20

STATISTICS OF NURSE TRAINING SCHOOLS, 1910-11.

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244	Iowa City	Mary E. Nesbit	66	3	7	126	20	Yes	9	1 year H. S.	20
245	do	Anna C. Goodale	12	4	4	30	6	Yes	7-9	C. S.	24
246	Iowa Falls	Margaret Stoddard	10	2	2	15	15	Yes	10	H. S.	18-25
247	Keokuk	N.	18	2	2	35	35	Yes	10	H. S.	18-25
248	do		20	2	2	80	80	Yes	94	1 year H. S.	18-25
249	Lyons		6	2	2	30	30	Yes	9	H. S.	18-25
250	Marshalltown		2	2	2	25	25	Yes	9	H. S.	18-25
251	Mason City		21	2	2	40	40	Yes	8-10	8th grade	18-25
252	Monroe		21	2	2	50	50	Yes	8	H. S.	18-25
253	Nebraska		14	2	2	44	44	No	8	H. S.	18-25
254	Ottumwa		14	2	2	100	100	No	9	H. S.	18-25
255	Sauk City		45	2	2	30	30	No	9	H. S.	18-25
256	do	Nellie M. Foster	21	2	2	40	40	No	9	H. S.	18-25
257	do	Aurilia J. Perry	21	2	2	30	30	No	9	H. S.	18-25
258	Waverly		18	2	2	15	15	Yes	12	H. S.	18-25
259	Ellsworth	Henry Z. Hissam, M. D.	4	2	2	50	50	Yes	10	do	20-35
260	Kansas City	Elizabeth J. Bacon	28	2	2	20	20	Yes	10	do	20-35
261	do	Frances M. Williams	6	2	2	75	75	Yes	10	do	20-35
262	Lawrence	Leura Hestler	9	2	2	60	60	Yes	10	do	20-35
263	Leavenworth		10	2	2	40	40	Yes	10	do	20-35
264	do		13	2	2	31	31	No	9	do	20-35
265	Pittsburg		13	2	2	35	35	No	9	do	20-35
266	Reedburg		25	2	2	50	50	No	9	do	20-35
267	Robinson		16	2	2	75	75	No	10	do	20-35
268	Topeka		22	2	2	75	75	No	10	do	20-35
269	do	Isabel M. Woodburn	22	2	2	75	75	No	10	do	20-35
270	Wichita		21	2	2	75	75	No	10	do	20-35
271	Dayton	Sophie Steinhauser	6	2	2	20	20	Yes	9	1 year H. S.	20-35
272	Franklin		6	2	2	12	12	Yes	9	1 year H. S.	20-35
273	Henderson		6	2	2	100	100	Yes	9	1 year H. S.	20-35
274	do		25	2	2	50	50	Yes	9	1 year H. S.	20-35
275	Lexington		10	2	2	35	35	Yes	9	1 year H. S.	20-35
276	Louisville		6	2	2	20	20	Yes	9	1 year H. S.	20-35
277	do	Elizabeth Berchardling	17	2	2	60	60	No	9	1 year H. S.	20-35
278	do		8	2	2	100	100	No	9	1 year H. S.	20-35
279	do	Katherine Deam, E. N.	24	2	2	20	20	No	9	1 year H. S.	20-35
280	do		28	2	2	12	12	No	9	1 year H. S.	20-35
281	do		6	2	2	25	25	No	9	1 year H. S.	20-35
282	Owensboro	Ellen Green Davis	6	2	2	25	25	No	9	1 year H. S.	20-35

Abbreviations used: C. S. = Common school. H. S. = High school.

* Statistics of 1910.

TABLE 3.—Statistics of schools for the training of professional nurses for the school year 1910-11—Class A—Continued.

Location.	Name of school or hospital with which it is connected.	Superintendent of nurses.	Students enrolled.	Years in course.	Graduates in 1911.	Capacity (beds).	Average daily number of patients.	Are students sent into families during training?	Daily number of hours on duty.	Requirements for admission.	
										Education. ¹	Age.
1	2	3	4	5	6	7	8	9	10	11	12
LOUISIANA.											
284	Alexandria.	J. L. Wilson, M. D.	4		1	20	8	Rarely.	12	G. S.	18
285	New Orleans.	Sister Dolores.	128		39	1,060		No.	104	C. S.	18
286	do.	Sister Mary Grues.	30		0	00	14	Yes.	7	8th grade.	18
287	do.	R. T. Fuller, M. D.	8		4	16	12	No.	9	C. S.	21-25
288	do.	E. K. Zeller.	60		16	100	150	No.	9	C. S.	20-25
289	Shreveport.	Sister Mary Rapin.	25		8	200	115	No.	11	H. S.	21
290	do.	J. M. Callaway, M. D.	22		2	200		No.			
MAINE.											
291	Augusta.		20		2	55	55	Yes.	8	do.	20-25
292	Bangor.		32		1	120	25	No.	6	do.	22-25
293	Bridgton.		24		11	80	25	Yes.	11	H. S.	23
294	Lawson.		20		0	70	40	No.	11	do.	21
295	do.		24		0	140	85	Yes.	8-9	do.	21
296	Potter.		24		2	70	64	No.	94	do.	20-20
297	Potter.	Helen L. Keck.	24		2	70	64	No.	94	do.	20-20
298	do.	Miller, Keck.	18		2	70	64	No.	94	do.	21-25
299	do.	William M. P.	18		2	70	64	No.	94	do.	21-25
300	do.	Harriet M. H.	18		2	70	64	No.	94	do.	21-25
301	do.	Harriet M. H.	18		2	70	64	No.	94	do.	21-25
302	do.	Maud B. R.	18		2	70	64	No.	94	do.	21-25
303	Rockland.	Margaret D. Sibby.	6		1	25	10	No.	8	do.	21-21
MARYLAND.											
303	Baltimore.	Pease A. Bealing, R. N.	14		2	125		No.	94	do.	21
304	do.		46		11	185	135	No.	10	do.	21
305	do.		16		3	90	45	No.	9	do.	20-25
306	do.		10		2	32	21	No.	124	do.	20-25
307	do.		24		6	100	50	No.	10	C. S.	18-23
308	do.		41		52	200	207	No.	8	H. S.	22
309	do.		110		25	200	207	No.	8	do.	23-25
310	do.		20		5	65	45	No.	10	do.	20-25
311	do.		20		5	65	45	No.	10	8th grade.	21

	Mary Hospital.	Miss Mary Claude Raden, R. N.	66	3	18	300	276	No.	9	H. S.	22-30
311	do.	Annabel Wilson	6	2	1	26					
312	do.		28	2	4	255					
313	do.		43	3	7	254					
314	do.		43	3	14	110	170	No.	8	H. S.	20-23
315	do.		43	3	17	243	200	No.	9-10	1 year H. S.	22-25
316	do.		75	3	2	40	26	No.	9	2 years H. S.	21-27
317	Cumtland.		20	3	2	52					
318	do.		20	3	2	49	30	No.	10	H. S.	20-25
319	Frederick.		8	3	2	22	15	Yes	9	.do.	20-30
320	Hagerstown.		10	3	3	22					
321	Baltimore.	Mary Francis Ebell, R. N.	14	3	3	140					
MASSACHUSETTS.											
322	Attleborough.		15	3	2	75					
323	Beverly.	Mary B. Nichols.	19	3	2	62	80	No.	9	H. S.	21-30
324	Boston (Jamaica Plain).		19	3	4	62	50	No.	10	.do.	21-30
325	Boston.		67	3	26	101		Yes	8	C. S.	22-30
326	Boston (South Boston).		4-6	2	10	100	180	No.	9	H. S.	21-23
327	Boston.		12	2	10	100	70	No.	9	H. S.	21
328	do.		12	2	10	100	70	No.	9	.do.	21
329	do.		12	2	10	100	70	No.	9	.do.	21
330	do.		12	2	10	100	70	No.	9	.do.	21
331	Boston (Jamaica Plain).		12	2	10	100	70	No.	9	.do.	21
332	Boston.		12	2	10	100	70	No.	9	.do.	21
333	do.		12	2	10	100	70	No.	9	.do.	21
334	do.		12	2	10	100	70	No.	9	.do.	21
335	do.		12	2	10	100	70	No.	9	.do.	21
336	do.		12	2	10	100	70	No.	9	.do.	21
337	do.		12	2	10	100	70	No.	9	.do.	21
338	do.		12	2	10	100	70	No.	9	.do.	21
339	do.		12	2	10	100	70	No.	9	.do.	21
340	do.		12	2	10	100	70	No.	9	.do.	21
341	do.		12	2	10	100	70	No.	9	.do.	21
342	Boston.		12	2	10	100	70	No.	9	.do.	21
343	Cambridge.		12	2	10	100	70	No.	9	.do.	21
344	Chelsea.		12	2	10	100	70	No.	9	.do.	21
345	Clinton.		12	2	10	100	70	No.	9	.do.	21
346	Everett.		12	2	10	100	70	No.	9	.do.	21
347	Fall River.		12	2	10	100	70	No.	9	.do.	21
348	Fitchburg.		12	2	10	100	70	No.	9	.do.	21
349	Gloucester.		12	2	10	100	70	No.	9	.do.	21
350	Haverhill.		12	2	10	100	70	No.	9	.do.	21
351	Holyoke.		12	2	10	100	70	No.	9	.do.	21
352	do.		12	2	10	100	70	No.	9	.do.	21
353	Lawrence.		12	2	10	100	70	No.	9	.do.	21
354	Lowell.		12	2	10	100	70	No.	9	.do.	21
355	do.		12	2	10	100	70	No.	9	.do.	21
356	do.		12	2	10	100	70	No.	9	.do.	21

Abbreviations used: C. S. = Common school. H. S. = High school.

Statistics of 1910.

EDUCATIONAL STATUS OF NURSING.

Location.	Name of school or hospital with which it is connected.	Superintendent of nurses.	Students enrolled.	Years in course.	Graduates in 1911.	Capacity (beds).	Average daily number of patients.	Are students sent into families during term?	Daily number of hours on duty.	Requirements for admission.	
										Education. ¹	Age.
1	2	3	4	5	6	7	8	9	10	11	12
MASSACHUSETTS—CON.											
357 Lowell.....			21	3	3	66	45	No.	9	1 year H. S.	22-25
358 Lynn.....			25	2	6	90	30	No.	11	C. S.	21-25
359 do.....			19	3	6	35	30	Yes.	9	H. S.	21-25
360 Malden.....			27	3	4	80	43	No.	9	1 year H. S.	21-25
361 Melrose.....			13	3	4	19	14	Yes.	9	H. S.	21-25
362 do.....			41	2	11	80	14	Yes.	8	1 year H. S.	21-25
363 Montague City.....			14	2	2	50	15	Yes.	10	1 year H. S.	21
364 Natick.....			13	2	6	25	17	Yes.	9 ⁴	H. S.	21
365 New Bedford.....			13	2 ⁴	4	40	25	No.	12	8th grade.	21-23
366 Newburyport.....			14	3	2	30	18	Yes.	10	H. S.	21-20
367 do.....			63	3	21	165	65				
368 Newton Lower Falls.....			17	2 ⁴	9	65	50	Yes.	12	H. S.	21-30
369 North Adams.....			32	3	5	100	74	No.	9 ⁴	C. S.	20
370 Northampton.....			56	3	13	130					
371 Pittsfield.....											
372 Plymouth.....			9	2 ⁴	3	20					
373 Quincy.....			10	3	3	50					
374 Salem.....			26	2 ⁴	6	100		No.	10	H. S.	21-35
375 Somerville.....			20	3	6	40	25	Yes.	10 ⁴	1 year H. S.	22-35
376 South Framingham.....			41	3	7	50	30	Yes.	9 ⁴	H. S.	22-35
377 Springfield.....			25	3	11	150	7	No.	10	1 year H. S.	21-30
378 do.....			45	3	11	100	88	No.	10	H. S.	20-25
379 do.....			34	3	11	60	80	Yes.	9	do	21
380 Taunton.....			12	3	4	25	15	No.	9	do	21-35
381 do.....				2		15					
382 Waltham.....			92	4	14	100	50	Yes.	9	C. S.	19-25
383 Westfield.....			13	3	2	50	27	No.	9 ⁴	do	21
384 Woburn.....			20	2 ⁴	2	50	10	Yes.	9	H. S.	20-25
385 Worcester.....			110	3	24	200	210	No.	9	do	20-30
386 do.....			34	3	1	25	14	Yes.	10	do	21
387 do.....			67	3	1	150		No.	9	1 year H. S.	20-25
388 do.....			26	3	5	110	55	No.	10	H. S.	21-35

No.	School	Instructor	No. of students	No. of graduates	Yes	No.	C. S.	H. S.	1910-11
389	Alma	L. N. Brainerd, M. D.	5	3	15	4	Yes	12	15
390	Ann Arbor	Luella Bristol	75	19	30	240	No.	10	20-32
391	do	D. W. Myers, M. D.	40	3	100	85	Yes	10	21-35
392	do	Fantus Pemberton	10	4	9	9	do	9	19
393	Basile Creek	Mrs. M. S. Foy	180	41	650	28	Yes	9	18-21
394	do	N.	20	3	46	40	No.	94	21
395	Bay City	N.	20	7	100	12	No.	8	19-30
396	Benton Harbor	Mc	16	4	100	85	Yes	8	20-30
397	Big Rapids		10	3	25		Yes	10	21-35
398	Calumet		14	3	150	191	Yes	8	22
399	Calumet and Hecla Hospital *		62	3	24	12	Yes	10	18-35
400	Boulevard Sanitarium		50	15	200	24	No.	10	20-30
401	Grace Hospital *	C. P. van der Water	84	35	160	191	Yes	10	20-30
402	do		4	2	24	12	Yes	10	21-35
403	do	Lottie Chambers	50	15	200	24	No.	10	20-30
404	do	Sister Lucia	14	4	50	24	Yes	10	21-35
405	do		21	24	100	70	No.	8	21-35
406	Grand Rapids	R. N.	45	14	100	70	No.	9	21
407	do		20	3	45	45	Yes	10	21
408	do		40	3	10	70	No.	9	21-35
409	Iselson	D.	17	3	50	27	No.	10	21
410	Kalamazoo		12	3	125		Yes	10	21
411	do		23	3	45	25	No.	94	20-30
412	Lake Linden	Irene V. B. van Felt	8	3	30	25	Yes	12	21
413	Lansing	Zetta De Witt	19	24	3	25	Yes	12	21
414	Leaumont	Mabel L. Morgan	8	3	25	10	Yes	12	21
415	Ledington	Nettie L. Lester, R. N.	8	24	16		No.	10	20
416	Manistee	Nellie E. Dart	14	3	75		No.	10	20
417	Marquette	Sister M. Camillus	7	2	25		No.	10	20
418	Morrit Clemens	Mrs. Clara L. Mack	14	5	3	100	Yes	10	20
419	Muskegon	Sister M. Bertha	20	3	9	60	No.	10	20
420	do	N.	47	3	42	25	Yes	10	20
421	Petokey		4	24	15	12	No.	10	20
422	Port Huron		12	2	34	17	No.	12	20
423	Baginaw		27	3	90	95	No.	10	20
424	do		12	4	22	15	Yes	10	20
425	Saint Ste. Marie		12	24	15	15	Yes	10	20
426	Trimountain	Colma MacDonald	6	1	30		Yes	10	20
427	do		17	3	87	60	Yes	10	21
428	Brainerd	Maudie Isabel Manning	5	2	25		Yes	10	21
429	Crookston	Desaunes Ovidia Olson	5	2	25		Yes	10	21

* Abbreviations used: C. S. - Common school. H. S. - High school.

* Statistics of 1910.

TABLE 3.—Statistics of schools for the training of professional nurses for the school year 1910-11—Class A—Continued.

Location.	Name of school or hospital with which it is connected.	Superintendent of nurses.	Students enrolled.	Years in course.	Graduates in 1911.	Capacity (beds).	Average daily number of patients.	Are students sent into families during training?	Daily number of hours on duty.	Requirements for admission.	
										Education. ¹	Age.
1	2	3	4	5	6	7	8	9	10	11	12
MINNESOTA—contd.											
430	Duluth	Frances E. Smith, R. N.	30	3	7	100					
431	Fergus Falls	Eva M. F. Bratton, R. N.	14	3	3	27	25	Rarely	10	8th grade.	20
432	do.	Sister Marie Olson.	10	2	3	38		No.	10	H. S.	21-31
433	Minneapolis	Susan Holmes.	13	2	4	30	75	No.	9	C. S.	23-35
434	do.	Amy Allison.	43	3	14	103					
435	do.	Martha G. Ripley, M. D.	12	3	4	58	104	No.	9	8th grade.	21
436	do.	Francis E. Morley.	41	3	12	250					
437	do.	Grace Watson.	20	3	6	90					
438	do.	Sister Superior Lena Wilson.	20	3	4	90					
439	do.	Grace H. Cameron, R. N.	35	3	10	90					
440	do.	Sister Mildred.	20	3	11	140	110	No.	8-9	1 year H. S.	21
441	do.	Elizabeth Peterson.	18	3	1	62	46	No.	8	H. S.	20-35
442	do.	Louise M. Powell.	5	3	1	30	20	Yes.	10	C. S.	20
443	Moorhead	Daniel C. Darrow, M. D.	8	3	1	25	20	No.	8	H. S.	18
444	Princeton	Frances B. Cooney.	12	3	4	50	27	Yes.	9	8th grade.	21-35
445	Red Wing	Hannah Keller.	10	3	6	120					
446	St. Paul	Sister Eleonora Stettengren.	85	3	14	600	14	No.	8	8th grade.	21
447	do.	do.	8	3	3	18					
448	do.	Sister Bernardine.	13	3	4	45	80	No.	10	H. S.	20-30
449	do.	do.	90	3	24	150	108	No.	8	do.	19-35
450	do.	Margaret A. Crowl, R. N.	44	3	11	100		No.	10	do.	21-35
451	do.	do.	7	3	3	25	12	Yes.	9	do.	18
452	Stillwater	do.	18	3	5	25	22	Rarely	10	C. S.	21-34
453	Warren	do.	13	3	9	62	31	No.	8	8th grade.	20-30
454	Winona	do.									
MISSISSIPPI.											
455	Alcorn.	E. A. Gordon, M. D.	12	3	2	12					
456	Gulport.	Elizabeth A. Lealey.	7	2	2	24	16	Rarely	8	H. S.	21
457	Jackson.	Emma May Henning.	8	2	2	160	120	Yes.	104	do.	18-35
458	Natchez.	Marian J. Paris.	23	2	11	100		Yes.	94	C. S.	18-30
459	Vicksburg	do.	20	24	24	30					
460	do.	M. L. Godbolt.	13	2	8						

TABLE 3.—Statistics of schools for the training of professional nurses for the school year 1910-11—Class A—Continued.

Location.	Name of school or hospital with which it is connected.	Superintendent of nurses.	Students enrolled.	Years in course.	Graduates in 1911.	Capacity (beds).	Average daily number of patients.	Are students sent to families during training.	Daily number of hours on duty.	Requirements for admission.	
										Education.	Age.
1	2	3	4	5	6	7	8	9	10	11	12
NEBRASKA—contd.											
501	Lincoln		11	2	6	65					
502	do.		15	2	4	42					
503	Omaha		36	2	4	80	94	No.	20	H. S.	21-30
504	do.		7	2	2	200					
505	do.		14	2	4	60					
506	do.		17	2	4	60					
507	do.		80	2	4	100	80	Rarely	9	H. S.	21-35
508	do.		24	2	6	30	45	No.	10	C. S.	20
509	do.	Mary C. Wack.	22	2	4	20	40		8	C. S.	21
510	do.	J. E. Graham.	16	2	4	20	20		8	C. S.	21
511	do.	Hilda Christian Fastwood.	24	2	12	65		No.	8	H. S.	20-35
512	South Omaha	Ida B. Hulets.	8	2	2	21	18	Yes.	94	8th grade.	21
NEW HAMPSHIRE.											
513	Claremont	Nellie A. Steere.	11	2	7	25	18	Yes.	94	H. S.	20-35
514	Concord	Irene Bowers.	17	2	7	60	30	Yes.	9	1 year H. S.	21-35
515	do.	Roseana O'Donnoghue.	10	2	2	28	18	Yes.	9	H. S.	21-35
516	Dover		14	2	4	25	25	No.	9	do.	21-35
517	Exeter	N.	10	2	4	25	15	Yes.	9	C. S.	20
518	Haver	I.	21	2	6	35	37	Rarely	10	1 year H. S.	21-35
519	Keene		23	2	7	30					
520	Lebanon		7	2	4	25					
521	Manchester		18	2	4	40	21	No.	9	1 year H. S.	21-35
522	do.		16	2	4	60	46	No.	9	H. S.	21-35
523	Nashua		16	2	6	60	29	Rarely	9	8th grade.	21-30
524	do.	R. N.	14	2	6	20	20	Yes.	8	do.	21
525	Whitfield		16	2	1	25	20	Yes.	10	H. S.	20-25
526	Woodsville		9	2	1	26	8	Yes.	104	do.	20-25

STATISTICS OF NURSE TRAINING SCHOOLS, 1910-11.

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NEW JERSEY.											
527	Atlantic City	Nannette S. Burkhard	10	3	7	150	60	Yes	12	do.	21
528	Bayonne	Della M. Fischer, R. N.	14	3	3	33			13	C. S.	20-35
529	Bridgeport	Dorothy M. Ferris	8	3	3	12	12	Yes	10	1 year H. S.	20-30
530	Camden	Frances Allen Worrell	35	3	7	125			10	C. S.	21-35
531	do.	C. E. MacNichols	13	3	3	40	35	Rarely			21-35
532	Ellisabeth	do.	39	3	9	130	75	Yes	9	do.	21-30
533	Englewood	N. N.	19	3	3	56	30	Rarely	9	2 years H. S.	21-22
534	Hackensack	do.	12	2	12	60	40	No.	12	1 year H. S.	21
535	Jersey City	do.	25	3	12	102	90	No.	9	C. S.	21
536	Long Branch	do.	30	24	7	120	75	No.	8	1 year H. S.	20-35
537	Montclair	do.	27	3	8	86	45	Rarely	9	do.	20-35
538	Morris town	do.	16	24	5	74	54	No.	9	do.	20-35
539	Newark	do.	22	24	8	50	25	Rarely	10	2 years H. S.	20-35
540	do.	do.	28	3	7	90	75	No.	10	C. S.	18-40
541	do.	do.	76	3	23	320	306	No.	9	2 years H. S.	21-35
542	do.	do.	19	3	9	75	53	No.	9	1 year H. S.	21
543	do.	R. N.	34	3	8	94	67	No.	11	C. S.	21
544	do.	do.	21	3	13	78	83	No.	9	1 year H. S.	20-30
545	Orange	do.	35	3	7	100	60	No.	12	C. S.	18
546	Parsippany	do.	13	3	4	40	40	No.	11	C. S.	21
547	do.	do.	20	3	10	75					21
548	Parsippany	do.	20	3	11	125	100	Yes	104	H. S.	20-35
549	Paterson	do.	46	3	3	20	20	No.	9	C. S.	20-35
550	Paterson	do.	6	3	4	57	44	No.	9	1 year H. S.	20-35
551	Paterson	do.	18	3	6	75	50	No.	9	C. S.	20-35
552	Paterson	do.	20	3	4	76	60	No.	11	H. S.	18-35
553	Paterson	do.	20	3	4	76	60	No.	11	H. S.	20-35
554	Paterson	do.	20	3	4	76	60	No.	11	H. S.	20-35
555	Paterson	do.	14	3	6	43	33	No.	10	do.	20-35
NEW MEXICO.											
556	Albuquerque	Slater Philip Neri	14	3	6	100	60	Yes			18-30
NEW YORK.											
557	Albany	do.	110	3	11	250	235	No.	10	2 years H. S.	21
558	do.	do.	29	3	6	90	64	No.	9	1 year H. S.	20-35
559	do.	do.	32	3	9	103	90	No.	9	do.	21
560	Amsterdam	do.	11	24	2	50	19	No.	9	do.	21
561	Auburn	do.	26	3	6	100	63	No.	9	C. S.	21
562	Binghamton	do.	20	3	6	64	34	No.	8	C. S.	21-35
563	Brooklyn	do.	4	3	2	34	34	No.	8	1 year H. S.	21-30
564	do.	do.	12	23	2	44	34	No.	8	do.	20-30
565	do.	do.	44	3	9	190	124	No.	94	do.	20-30

Abbreviations used: C. S. = Common school. H. S. = High school.

* Statistics of 1910.

TABLE 3.—*Statistics of schools for the training of professional nurses for the school year 1910-11—Class A—Continued.*

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TABLE 3.—Statistics of schools for the training of professional nurses for the school year 1910-11—Class A—Continued.

Location.	Name of school or hospital with which it is connected.	Superintendent of nurses.	Students enrolled.	Years in course.	Graduates in 1911.	Capacity (beds).	Average daily number of patients.	Are students sent into families during training?	Daily number of hours on duty.	Requirements for admission.	
										Education.	Age.
1	2	3	4	5	6	7	8	9	10	11	12
NEW YORK—continued.											
635	New York.....		113	3	25	223	214	No.	8	H. S.	22-33
636	do.....		63	24	20	254	180	No.	84	2 years H. S.	22-33
637	do.....		125	3	20	310	250	No.	9	H. S.	22-33
638	do.....		21	5	3	70	70	Yes.	84	1 year H. S.	20-30
639	do.....		24	24	12	122	90	No.	9	do	19-33
640	do.....		92	2	24	382	322	No.	10	do	21-33
641	do.....		23	3	7	72	60	No.	9	do	19-30
642	New York (Borough of Richmond).										
643	New York (Tompkinsville).		40	3	18	180	100	No.	9	H. S.	21
644	New York.....	M. R. Pratt, M. D.	33	3	9	85	66	No.	9	1 year H. S.	21-35
645	do.....		10	24	1	35	20	No.	9	do	19-30
646	do.....		13	2	10	6					
647	do.....		4	2		28					
648	Niagara Falls.		39	3	6	90	60	No.	10	1 year H. S.	19-25
649	Ogdensburg.		20	3	4	65					
650	Olean.		7	3	2	15	12	No.	10	H. S.	20-30
651	Oneida.		6	3	2	20	13	No.	9	1 year H. S.	18
652	Osceola.		7	24	1	25	15	No.	10	do	20-35
653	Oshtemo.		9	3	3	20		Yes.	10	do	20-30
654	Owego.		18	3	1	60	33	No.	9	1 year H. S.	20
655	Pennell.		4	10	3	50		Yes.	9	do	19-30
656	Poughkeepsie.		24	3	3	65	60	No.	7	do	20
657	Rochester.		11	3	3	45	30	No.	10	do	19
658	do.....		35	3	8	115	88	No.	10	do	18-30
659	do.....		18	3		51	45	Yes.	10	do	20-30
660	do.....		61	3	25	140	103	No.	84	do	20-30
661	do.....		44	3	12	144	104	No.	84	do	20
662	do.....		20	3	3	200	126	No.	10	do	21
663	Rome.		12	3	2	30	16	Yes.	8-9	do	21
664	Saratoga Springs.		12	3	5	80	22	No.	10	do	19-35

664	Schematicity.....	N Associate.....	Author T. Jackson, R. N.....	8	180	89	No.	9	do.	29
665	do.			10	25	51	No.	8	do.	21
666	Syracuse			71	120	114	No.	8	do.	15-25
667	do.			26	130	10	Yes.	8	do.	21
668	do.		N	10	144	35	No.	10	H. S.	H. S.
669	do.	i Children.		7	163	100	No.	10	1 year H. S.	11
670	Troy			2	124	100	No.	10	1 year H. S.	20-25
671	do.			87	115	100	No.	10	do.	20-25
672	Utica			27	40	35	No.	9	do.	20-25
673	do.			27	89	55	No.	10	C. S.	20-25
674	do.			16	78	50	No.	10	1 year H. S.	21
675	do.			10	20	13	No.	9	H. S.	21
676	Watertown.			16	7	50	No.	9	1 year H. S.	21-25
677	do.			16	7	50	No.	9	do.	21
678	White Plains.		N.	15	20	50	No.	13	do.	21
679	Yonkers	of the St.		15	3	11	No.	9	do.	21-25
680	do.		Letitia B. Shaugnessy, R. N	24	76	76	No.	13	1 year H. S.	18
681	do.		Marion McLimont.	17	76	20	No.	13	1 year H. S.	18
NORTH CAROLINA.										
682	Asheville.	Dr. Cornell's Sanatorium.	Miss S. A. Wilson.	17	50	25	Yes.	84	do.	18
683	do.	Asheville Mason Hospital.	Mrs. Perkins Linton.	24	50	10	Barry.	10	C. S.	21
684	Biltmore.	Clarence Barker Memorial Hospital and Dis.	M. H. Trist.	3	15	5	No.	10	H. S.	20-30
685	Charlotte.			3	15	13	No.	10	H. S.	20-30
686	do.			4	48	13	No.	10	H. S.	20-30
687	do.			4	48	13	No.	10	H. S.	20-30
688	do.			4	48	13	No.	10	H. S.	20-30
689	Durham.			3	15	5	No.	10	H. S.	20-30
690	Greensboro.			3	15	5	No.	10	H. S.	20-30
691	Laurinburg.			3	15	5	No.	10	H. S.	20-30
692	Lincolnton.			3	15	5	No.	10	H. S.	20-30
693	Lumberton.			3	15	5	No.	10	H. S.	20-30
694	Morganton.			3	15	5	No.	10	H. S.	20-30
695	Raleigh.			3	15	5	No.	10	H. S.	20-30
696	do.		Mark Purdon Allen, R. N.	3	15	5	No.	10	H. S.	20-30
697	Salisbury.			3	15	5	No.	10	H. S.	20-30
698	do.			3	15	5	No.	10	H. S.	20-30
699	Stanford.		Dr. Catharine P. Hawkes.	3	15	5	No.	10	H. S.	20-30
700	Stateville.	Company		3	15	5	No.	10	H. S.	20-30
701	Tarboro.			3	15	5	No.	10	H. S.	20-30
702	Washington.			3	15	5	No.	10	H. S.	20-30
703	do.			3	15	5	No.	10	H. S.	20-30
704	Wet Durham.			3	15	5	No.	10	H. S.	20-30
705	Wilmington.			3	15	5	No.	10	H. S.	20-30
706	Wilson.		N	3	15	5	No.	10	H. S.	20-30
707	Winston-Salem.			3	15	5	No.	10	H. S.	20-30
708	do.		L. Eucenia Henderson, R. N	11	20	47	No.	9	1 year H. S.	21-25

Abbreviations used: C. S. = Common school. H. S. = High school.

Situation of 1910.

TABLE 3.—Statistics of schools for the training of professional nurses for the school year 1910-11—Class A—Continued.

Location.	Name of school or hospital with which it is connected.	Superintendent of nurses.	Students enrolled.	Years in course.	Graduates in 1911.	Capacity (beds).	Average daily number of patients.	Are students sent into families during training?	Daily number of hours on duty.	Requirements for admission.	
										Education.	Age.
1	2	3	4	5	6	7	8	9	10	11	12
NORTH DAKOTA.											
707 Fargo.	Hospital.	Sister Madeleine.	23	3	6	72					
708 Grand Forks.		Sister Leonard.	11	4	4	65					
709 do.		Maudie H. Sides.	16	4	1	50					
710 Jamestown.		Deaconess Mildred Olson.	8	2	3	15					
711 Northwood.	Northwood Deaconess Hospital.		10	2	5	30	12	Yes.	10	C. S.	18-30
OHIO.											
712 Akron.			25	3	5	80	76	No.	9	H. S.	21-35
713 Alliance.			8	2	2	18					
714 Ashland.			12	3	2	23		Rarely.	9	H. S.	20-34
715 Canton.			14	3	4	60		Yes.	12	1 year H. S.	21-30
716 Cincinnati.			24	3	9	85	61	No.	10	C. S.	20
717 do.			64	3	14	120	88	No.	8	H. S.	20-30
718 do.			72	3	25	500	9	No.	9	do.	21-30
719 do.			10	14	5	66	50	Yes.	10	C. S.	18-30
720 do.			23	3	1	75			9	H. S.	21
721 do.	Children's Hospital.	Sister Albertine.	33	3	6	125	80	No.	94	do.	21
722 do.			3	1	19	19	8	Yes.	10	8th grade.	20-35
723 do.			10	2	2	25					
CLEVELAND.											
724 Florence Nightingale Hall.			8	24	3	20	10	Rarely.	10	H. S.	22-32
725 do.		Emily M. Gent, R. N.	50	3	13	250					
726 do.	Nurses of the	Annie E. Irving.	29	24	5	112		No.	10	H. S.	21
727 do.			11	3	3	60	34	No.	10	9th grade.	21-30
728 do.			90	3	30	271	213	No.	8	H. S.	21-35
729 do.			8	2	3	35	20	No.	10	C. S.	21
730 do.			10	1	9	16		No.	12	H. S.	25
731 do.			8	3	1	30	25	No.	10	C. S.	21
732 do.			18	3	5	65					
733 do.			40	3	11	90	70	No.	9	1 year H. S.	21-35
734 do.			40	3	16	140	130	No.	10	2 years H. S.	20-35
735 do.			48	3	13	186	150	No.	94	H. S.	21-35
736 Columbus.	Grant Hospital.		76	3	13						

TABLE 3.—Statistics of schools for the training of professional nurses for the school year 1910-11—Class A—Continued.

Location.	Name of school or hospital with which it is connected.	Superintendent of nurses.	Students enrolled.	Years in course.	Graduates in 1911.	Capacity (beds).	Average daily number of patients.	Are students sent into families during training?	Daily number of hours on duty.	Requirements for admission.	
										Education.	Age.
1	2	3	4	5	6	7	8	9	10	11	12
PENNSYLVANIA—contd.											
777	Bradford.....		23	3	0	66	45	No.	34	C. S.	20-30
778	Bredford.....		20	3	0	100	66	No.	10	do.	20-30
779	Bryn Mawr.....		19	3	0	65	26	No.	0	1 year, H. S.	21-30
780	Butler.....		13	3	0	50	20	No.	0	do.	21-30
781	Carbonade.....		14	3	0	0	0	No.	0	do.	21-30
782	Chambersburg.....		10	3	0	0	0	No.	0	do.	21-30
783	Chapier.....		26	3	0	125	66	No.	10	C. S.	19-35
784	.....do.....		14	3	0	50	20	No.	0	H. S.	21-30
785	Clearfield.....		7	3	0	24	20	Yes.	10	H. S.	19
786	Columbia.....		8	3	0	24	20	Yes.	0	1 year, H. S.	21
787	Corry.....		12	3	0	50	19	No.	0	C. S.	19-30
788	Dr. Sola.....		7	3	0	23	20	No.	0	H. S.	21-30
789	Easton.....		15	3	0	100	61	No.	0	do.	21-30
790	Erle.....		23	3	0	100	67	No.	0	8th grade.	20-30
791	.....do.....		21	3	0	100	67	No.	0	H. S.	19-35
792	Penitentiary Springs.....		20	3	0	74	51	No.	12	8th grade.	20-30
793	Greensburg.....		25	3	0	100	60	No.	0	do.	21-30
794	Harmonburg.....		22	3	0	100	60	No.	0	H. S.	21-30
795	Harrison.....		22	3	0	100	60	No.	0	do.	21-30
796	Hawthorn.....		22	3	0	100	60	No.	0	do.	21-30
797	Kane.....		22	3	0	100	60	No.	0	do.	21-30
798	Lancaster.....		22	3	0	100	60	No.	0	do.	21-30
799	.....do.....		22	3	0	100	60	No.	0	do.	21-30
800	Lewistown.....		22	3	0	100	60	No.	0	do.	21-30
801	Lock Haven.....		22	3	0	100	60	No.	0	do.	21-30
802	McKeesport.....		22	3	0	100	60	No.	0	do.	21-30
803	McKeesport.....		22	3	0	100	60	No.	0	do.	21-30
804	McKeesport.....		22	3	0	100	60	No.	0	do.	21-30
805	McKeesport.....		22	3	0	100	60	No.	0	do.	21-30
806	McKeesport.....		22	3	0	100	60	No.	0	do.	21-30
807	Mount Pleasant.....		12	3	0	50	20	No.	0	C. S.	19-30

[illegible]

Abbreviations used: C. S. = Common school. H. S. = High school.

• Election of 1910

[illegible]

Abbreviations used: C. S. = Common school, H. S. = High school.

* Statistics of 1910.

TABLE 3.—Statistics of schools for the training of professional nurses for the school year 1910-11.—Class A.—Continued.

Location.	Name of school or hospital with which it is connected.	Superintendent of nurses.	Students enrolled.	Years in course.	Graduates in 1911.	Capacity (beds).	Average daily number of patients.	Are students sent into hospitals during training?	Daily number of hours on duty.	Requirements for admission.	
										Education.	Age.
TENNESSEE—contd.											
Nashville	Walden University Meharry Medical College	G. W. Hubbard.	7	3	4	25		Yes.	8	2 years H. S.	20
do.	Mercy Hospital.						70	No.			
do.	St. Thomas' Hospital.	Sister Sebastian.	20	3	7	26	20				
do.	Woman's Hospital of the State of Tennessee.	Emily Gordon Friend, R. N.	17	3	4	40	20		9	H. S.	19
Sevierville.	Hodgson Memorial Hospital*.	Carmel Studdath.	3	2	2	20					
TEXAS.											
Amarillo.	1.	Sister Mary Winifred.	8	3	2	100	40	Yes.	9	C. S.	18-20
Austin.		Richard Howe, R. N.	10	3	2	40	20	Yes.	11	H. S.	18-20
do.		Sister Ursula.	12	3	2	50	20	Yes.	9	C. S.	18-20
Dallas.		Sister Margaret.	20	3	4	120	40	Yes.	10	do.	21-25
do.	St. Paul's Sanitarium.		45	3	2	150	70	Yes.	9	H. S.	21-25
El Paso.	French Baptist Memorial Sanitarium.		20	3	2	150	70	Yes.	9	do.	21-25
do.			20	3	2	150	70	Yes.	9	do.	21-25
do.			20	3	2	150	70	Yes.	9	do.	21-25
Fort Worth.			20	3	2	150	70	Yes.	9	do.	21-25
Galveston.		M. D.	20	3	2	150	70	Yes.	9	do.	21-25
do.			20	3	2	150	70	Yes.	9	do.	21-25
Houston.			20	3	2	150	70	Yes.	9	do.	21-25
do.			20	3	2	150	70	Yes.	9	do.	21-25
San Antonio.			20	3	2	150	70	Yes.	9	do.	21-25
do.			20	3	2	150	70	Yes.	9	do.	21-25
do.			20	3	2	150	70	Yes.	9	do.	21-25
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do.			20	3	2	150	70	Yes.	9	do.	21-25
do.			20	3	2	150	70	Yes.	9	do.	21-25
do.			20	3	2	150	70	Yes.	9	do.	21-25
do.			20	3	2	150	70	Yes.	9	do.	

YEMOBY.														
843	Bristolboro.	28	45	3	4	32	26	Yes.	10	do.	12-30			
844	Burlington	45	3	3	1	120	90	Yes.	10	1 year H. S.	20-35			
845	Hardwick	3	20	3	0	15								
846	Montpelier	20	12	3	2	46	14	No.	94	C. S.	12-35			
847	Proctor	12	3	3	3	17	15	Yes.	10	do.	15-30			
848	Randolph	8	18	3	9	40	3	Yes.	10	H. S.	20-35			
849	Rutland	10	10	24	9	20	14	Rarely.	10	do.	28-35			
850	St. Albans.	24	1	1	1	26	18	Yes.	10	C. S.	21			
851	St. Johnsbury	18	3	2	10	45	47	Yes.	9	do.	19-35			
852	Winnsboro.	15												
MASTER SUPERIOR IN CHARGE OF NURSES.														
MISS N. A. SIMMONS, E. N.														
853	Alexandria	6	28	3	3	36	26	No.	12	do.	21			
854	Charlottesville.	28	3	3	3	110	28	Yes.	8	C. S.	22-35			
855	Danville.	30	3	3	3	75	7	Yes.	9	do.	20-30			
856	Fredericksburg	6	23	3	7	23								
857	Hampton.	23												
LYNCHBURG.														
858	Lynchburg	6	32	3	4	28	30	Yes.	10	H. S.	19			
859	Newport News.	32	11	140										
860	Norfolk.	45	21	3	3	50	37	No.	10	C. S.	21-30			
861	do.	13	3	4	35									
862	Petersburg	3	1	30										
863	Peromocott.	7	18	120	49			No.	8	1 year H. S.	21			
864	Richmond.	45	3	3	3	34		Yes.	24	do.	20-35			
865	do.	13	3	3	3	30		No.	8	H. S.	21			
866	do.	10	3	3	3	30		No.	8	C. S.	21			
867	do.	10	3	3	3	30		No.	8	do.	19-30			
868	do.	10	3	3	3	30		No.	8	H. S.	21			
869	do.	10	3	3	3	30		No.	8	do.	21			
870	do.	10	3	3	3	30		No.	8	H. S.	21			
871	do.	10	3	3	3	30		No.	8	do.	21			
872	do.	10	3	3	3	30		No.	8	H. S.	21			
873	do.	10	3	3	3	30		Yes.	8	do.	21			
ANGELICA P. DICKER														
MRS. PAUL SMITH.														
874	Aberdeen.	10	4	30	15	Yes.	15	Yes.	10	C. S.	18			
875	do.	4	30	30	10	No.	10	No.	10	1 year H. S.	20-35			
876	Bellingham.	30	3	3	3	100	35	Yes.	4	H. S.	20			
877	do.	30	3	3	3	30	33	No.	10	8th grade.	20			
878	Colfax.	3	3	3	3	32	30							
879	Everett.	15	24	4	30	45		No.	9	H. S.	20-30			
880	Hogland.	11	24	6	60	3		No.	8	8th grade.	20			
881	North Yakima.	13	3	3	30	3		No.	8	do.	20-30			
882	Port Angeles.	3	24	3	35			No.	8	H. S.	20-30			
883	Seattle.	36	3	3	3	50	50	No.	8	C. S.	20-30			
884	do.	45	3	3	4	180		No.	94	C. S.	20-30			
GRACE V. ALLEN.														

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* Statistic of 1910.

TABLE 3.—Statistics of schools for the training of professional nurses for the school year 1910-11—Class A—Continued.

Location.	Name of school or hospital with which it is connected.	Superintendent of nurses.	Students enrolled.	Years in course.	Graduates in 1911.	Capacity (beds).	Average daily number of patients.	Are students sent into families during training?	Daily number of hours on duty.	Requirements for admission.	
										Education. ¹	Age.
1	2	3	4	5	6	7	8	9	10	11	12
WASHINGTON—contd.											
985	Seattle		56	3	17	110	96	No.	9	8th grade.	20
986	do		8	3	3	80	32	No.	84	H. S.	20
987	Spokane		28	24	14	60	55	No.	84	do	21
988	do		8	2	3	55	55	No.	8	1 year H. S.	20-30
989	do		8	2	4	40	20	No.	10	H. S.	20
990	South Bend		56	2	12	100	8	Yes.	10	do	18
991	Tacoma		28	24	7	80	80	No.	10	H. S.	19
992	do	Sister Hilary	13	24	1	80	80	No.	10	8th grade.	18
993	Walla Walla		13	24	1	80	80	No.	10	H. S.	19
WEST VIRGINIA.											
994	Charleston	Emma Vernon	11	3	4	60	38	Yes.	12	C. S.	21
995	Charleburg	S. M. Mason, M. D.	10	3	3	70	18	Yes.	94	do	18-35
996	do	Sister M. Adelaide, R. N.	13	3	3	70	20	Yes.	94	do	18-35
997	Elkins		12	3	3	40	20	Yes.	9	C. S.	20
998	Fairmont		24	3	4	55	55	Ready.	20	H. S.	18-25
999	do		8	3	1	50	25	No.	94	do	20
1000	Glendale		10	3	5	84	84	No.	10	H. S.	21-35
1001	Hanson		15	3	5	90	83	No.	10	H. S.	21-35
1002	do		27	3	5	75	75	No.	10	H. S.	21
1003	Huntington	Sister Bryan	9	3	5	35	28	No.	10	H. S.	21
1004	do	Laura B. Ullek	18	3	5	100	100	No.	10	C. S.	18-27
1005	Keyer	D	6	3	4	35	13	No.	9	H. S.	18-30
1006	Mokandree		7	3	5	50	25	No.	8	H. S.	18-30
1007	Parkersburg		7	3	5	32	22	No.	8	H. S.	21
1008	do	Sister M. Bernadette Ouns.	10	3	5	50	25	No.	9	H. S.	21
1009	Wheeling	Mrs. M. G. Carpenter	24	3	5	60	60	No.	10	H. S.	21
WISCONSIN.											
1010	Beloit	Martha J. Head	6	2	4	17	9	Yes.	8	H. S.	20-30
1011	Green Bay	Tillie Gless	10	3	5	30	20	Yes.	10	H. S.	20-30
1012	do	Sister St. Catherine	14	3	5	33	30	Yes.	10	C. S.	22-35

No.	Name	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272	273	274	275	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	293	294	295	296	297	298	299	300	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316	317	318	319	320	321	322	323	324	325	326	327	328	329	330	331	332	333	334	335	336	337	338	339	340	341	342	343	344	345	346	347	348	349	350	351	352	353	354	355	356	357	358	359	360	361	362	363	364	365	366	367	368	369	370	371	372	373	374	375	376	377	378	379	380	381	382	383	384	385	386	387	388	389	390	391	392	393	394	395	396	397	398	399	400	401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	417	418	419	420	421	422	423	424	425	426	427	428	429	430	431	432	433	434	435	436	437	438	439	440	441	442	443	444	445	446	447	448	449	450	451	452	453	454	455	456	457	458	459	460	461	462	463	464	465	466	467	468	469	470	471	472	473	474	475	476	477	478	479	480	481	482	483	484	485	486	487	488	489	490	491	492	493	494	495	496	497	498	499	500	501	502	503	504	505	506	507	508	509	510	511	512	513	514	515	516	517	518	519	520	521	522	523	524	525	526	527	528	529	530	531	532	533	534	535	536	537	538	539	540	541	542	543	544	545	546	547	548	549	550	551	552	553	554	555	556	557	558	559	560	561	562	563	564	565	566	567	568	569	570	571	572	573	574	575	576	577	578	579	580	581	582	583	584	585	586	587	588	589	590	591	592	593	594	595	596	597	598	599	600	601	602	603	604	605	606	607	608	609	610	611	612	613	614	615	616	617	618	619	620	621	622	623	624	625	626	627	628	629	630	631	632	633	634	635	636	637	638	639	640	641	642	643	644	645	646	647	648	649	650	651	652	653	654	655	656	657	658	659	660	661	662	663	664	665	666	667	668	669	670	671	672	673	674	675	676	677	678	679	680	681	682	683	684	685	686	687	688	689	690	691	692	693	694	695	696	697	698	699	700	701	702	703	704	705	706	707	708	709	710	711	712	713	714	715	716	717	718	719	720	721	722	723	724	725	726	727	728	729	730	731	732	733	734	735	736	737	738	739	740	741	742	743	744	745	746	747	748	749	750	751	752	753	754	755	756	757	758	759	760	761	762	763	764	765	766	767	768	769	770	771	772	773	774	775	776	777	778	779	780	781	782	783	784	785	786	787	788	789	790	791	792	793	794	795	796	797	798	799	800	801	802	803	804	805	806	807	808	809	810	811	812	813	814	815	816	817	818	819	820	821	822	823	824	825	826	827	828	829	830	831	832	833	834	835	836	837	838	839	840	841	842	843	844	845	846	847	848	849	850	851	852	853	854	855	856	857	858	859	860	861	862	863	864	865	866	867	868	869	870	871	872	873	874	875	876	877	878	879	880	881	882	883	884	885	886	887	888	889	890	891	892	893	894	895	896	897	898	899	900	901	902	903	904	905	906	907	908	909	910	911	912	913	914	915	916	917	918	919	920	921	922	923	924	925	926	927	928	929	930	931	932	933	934	935	936	937	938	939	940	941	942	943	944	945	946	947	948	949	950	951	952	953	954	955	956	957	958	959	960	961	962	963	964	965	966	967	968	969	970	971	972	973	974	975	976	977	978	979	980	981	982	983	984	985	986	987	988	989	990	991	992	993	994	995	996	997	998	999	1000	1001	1002	1003	1004	1005	1006	1007	1008	1009	1010	1011	1012	1013	1014	1015	1016	1017	1018	1019	1020	1021	1022	1023	1024	1025	1026	1027	1028	1029	1030	1031	1032	1033	1034	1035	1036	1037	1038	1039	1040	1041	1042	1043	1044	1045	1046	1047	1048	1049	1050	1051	1052	1053	1054	1055	1056	1057	1058	1059	1060	1061	1062	1063	1064	1065	1066	1067	1068	1069	1070	1071	1072	1073	1074	1075	1076	1077	1078	1079	1080	1081	1082	1083	1084	1085	1086	1087	1088	1089	1090	1091	1092	1093	1094	1095	1096	1097	1098	1099	1100	1101	1102	1103	1104	1105	1106	1107	1108	1109	1110	1111	1112	1113	1114	1115	1116	1117	1118	1119	1120	1121	1122	1123	1124	1125	1126	1127	1128	1129	1130	1131	1132	1133	1134	1135	1136	1137	1138	1139	1140	1141	1142	1143	1144	1145	1146	1147	1148	1149	1150	1151	1152	1153	1154	1155	1156	1157	1158	1159	1160	1161	1162	1163	1164	1165	1166	1167	1168	1169	1170	1171	1172	1173	1174	1175	1176	1177	1178	1179	1180	1181	1182	1183	1184	1185	1186	1187	1188	1189	1190	1191	1192	1193	1194	1195	1196	1197	1198	1199	1200	1201	1202	1203	1204	1205	1206	1207	1208	1209	1210	1211	1212	1213	1214	1215	1216	1217	1218	1219	1220	1221	1222	1223	1224	1225	1226	1227	1228	1229	1230	1231	1232	1233	1234	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TABLE 4.—Hospitals and schools offering postgraduate or special courses.

Location.	Name of school or hospital with which it is connected.	Superintendent of course.	Students enrolled.	Months in course.	Graduates in 1911.	Capacity (beds).	Average daily number of patients.	Are students sent into families during training?	Daily number of hours on duty.	Entrance requirements.	
										Education.	Age.
1	3	3	4	5	6	7	8	9	10	11	12
CALIFORNIA.											
1 San Francisco.....	San Francisco Maternity Hospital.....	E. G. Harrison, M. D.....	4	3	4	12		No.....		C. S.	21-41
DISTRICT OF COLUMBIA.											
2 Washington.....	Florence Crittenton Training School for Nurses *.....	Margaret L. White.....	12	7	9	8					
ILLINOIS.											
3 Chicago.....	Chicago Lying-in Hospital and Dispensary Post-Graduate School.....	Mrs. Emma E. Koch.....	8	3		15		No.....	10		
MASSACHUSETTS.											
4 Boston.....	Boston Floating Hospital Postgraduate School.....	Sarah A. Egan.....	52	3	44	240	167	No.....			
5 "do.....	Infinite Hospital Postgraduate School.....	Margaret Farquhar.....	6	4	4			No.....	9		
6 Brooklyn.....	Free Hospital for Women Postgraduate School.....	Hannah Jane Erb.....	15	4½	14	60	40	No.....	8-9		
MINNESOTA.											
7 St. Louis.....	St. Louis Children's Hospital *.....	Ruth Riley.....	15	8		104	18				
8 "do.....	St. Louis Maternity Hospital.....	Miss O. Beyer.....	12	2		20					
NEW YORK.											
9 Brooklyn.....	St. Christopher's Hospital for Babies *.....	Jane Emily O'Daly.....	24	6	5	41	46	No.....	9-10		
10 New York City.....	General Memorial Hospital Postgraduate School.....		25	6		160					
11 "do.....	Hospital for Scarlet Fever and Diphtheria Patients.		8	2, 3	40	40		No.....	9		
12 "do.....	New York Eye and Ear Infirmary.....		43	2	2	176	130	No.....			
13 "do.....	New York Polytechnic Medical School and Hospital Postgraduate School.....	Agnes D. Cateson, R. N.....	9	9	23	90	86	No.....	11		
14 "do.....	Singer Hospital for Women.....	Mary E. Hurlbush.....	22	2		135	110	No.....	0		
15 "do.....	Society of Lying-in Hospital of the City of New York.....	Mary I. Bustard.....	56	3		100	127	No.....	12		

16	OHIO.	Ohio State Sanatorium.....	C. Elizabeth Allen.....	4	3	.....	96	63	.....	.....	.....	.....
17	PENNSYLVANIA.	Jewish Maternity Association Postgraduate School*	Rose Rubin, M. D.....	10	2, 3	.....	22	.....	.....	.....	.....	.....
18		Maternity Hospital.....	Mary D. Roche.....	5	3	.....	22	16	.....	.....	.....	.....
19		Pennsylvania Orthopaedic Institute and School of Mechano-Therapy.	Max J. Walter.....	73	3	51	.....	40	No....	6-8	C. S...	21
20		Preston Retreat Lying-in Hospital *	Margaret A. Thomas.....	60	2	.....	50	.....	.....	.....	.....	.....
21		Elizabeth Steel Magee Hospital.....	Frances A. Stone.....	7	3, 6	.....	50	46	No....	8	.....	.....
22	RHODE ISLAND.	Reineman Maternity Hospital *	Charles Edward Ziegler.....	20	3, 6	19	34	.....	.....	.....	.....	.....
23		Providence Lying-in Hospital.....	Alida Young.....	16	4	.....	50	30	No....	10	.....	.....

* Statistics of 1910.

! Abbreviation used: C. S. = Common school.

EDUCATIONAL STATUS OF NURSING.

TABLE 5.—*Statistics of schools for the training of professional nurses, for the school year 1910-11—Class B.*

[Class B includes schools connected with hospitals for the treatment of nervous and mental diseases, insane, etc.]

Location.	Name of school or hospital with which it is connected.	Superintendent of nurses.	Students enrolled.	Years in course.	Graduates in 1911.	Capacity (beds).	Average daily number of patients.	Are students sent into families during training?	Daily number of hours on duty.	Requirements for admission.	
										Education.	Age.
1	2	3	4	5	6	7	8	9	10	11	12
ALABAMA.											
1	Tuscaloosa.....	Brisson Hospital.....	31	2	12	1,500	1,510	Rarely.	9-10	C. S.	17
CONNECTICUT.											
2	Middletown.....	Connecticut State Hospital.....	21	2	8	2,500	.....	No.	104	C. S.	18
3	Norwich.....	Norwich State Hospital.....	16	2	6	850	.....	Yes.	104-114	C. S.	18
DISTRICT OF COLUMBIA.											
4	Washington.....	Government Hospital for Insane.....	47	2	13	2,978	2,887	No.	10	C. S.	18
ILLINOIS.											
5	Ana.....	I. D.....	60	3	5	1,500	.....	No.	12	C. S.	20
6	Dunning.....	D.....	162	3	13	2,308	.....	No.	10	C. S.	.....
7	Jacksonville.....	S. N.....	75	3	4	1,570	1,565	No.	12	C. S.	.....
8	Kankakee.....	.....	78	3	10	140	130	No.	10	C. S.	18-21
9	Peoria.....	.....	100	3	6	2,100	2,100	No.	8	C. S.	18
IOWA.											
10	Charlottesville.....	M. N. Voldang, M. D.....	19	2	4	1,150	1,062	No.	13	1 year H. S.	18
11	Clarinda.....	Max E. White.....	8	2	3	75	47	Yes.	10	C. S.	18
12	Glenwood.....	George McGriffe, M. D.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
13	Independence.....	W. P. Crumbecker, M. D.....	91	2, 3	21	1,256	1,171	No.	12	H. S.	20-22
14	Mt. Pleasant.....	C. F. Applegate, M. D.....	30	2	10	1,200	1,080	No.	12	C. S.	20

15	LAKE Superior	Ossawatimie State Hospital	11	2	3	1,300	1,300	No.	12	C. S.	18
16	LAKE Superior	Topaka State Hospital	60	2	6	1,300	1,300	No.	12	C. S.	18
17	KENTUCKY	Western Kentucky Asylum	17	3	3	1,200	1,150	No.	13	C. S.	18-35
18	MAINE	Maine Insane Hospital	13	2	6	900	860	No.	9	C. S.	18-25
19	MAINE	Bangor Insane Hospital	25	2	7	600	500	Yes	12	C. S.	21
20	MARYLAND	Sheppard and Enoch Pratt Hospital	19	2	10	150	105	No.	19	H. S.	21
21	MARYLAND	Springfield State Hospital	14	2	5	1,040	1,025	Rarely	12	C. S.	20
22	MASSACHUSETTS	Ethelbert A. Frick	23	2	7	1,800	1,437	No.	104	C. S.	21
23	MASSACHUSETTS	Edward French, M. D.	16	24	8	1,750	1,750	No.	12	C. S.	21
24	MASSACHUSETTS	Everett Flood	26	3	11	900	850	Yes	9	C. S.	21
25	MASSACHUSETTS	Alice E. Bedell	12	2	6	850	872	No.	12	C. S.	18
26	MASSACHUSETTS	Reba O. Cameron, R. N.	113	3	8	1,000	1,000	No.	8	C. S.	21-30
27	MASSACHUSETTS	Laura E. McEachran, R. N.	74	3	21	2,000	2,000	No.	94	C. S.	21-30
28	MASSACHUSETTS	Lucia E. Woodward	137	24	37	225	222	No.	12	H. S.	20-35
29	MASSACHUSETTS	Lottie Haines Miller	90	24	26	1,000	1,033	No.	10	C. S.	20
30	MASSACHUSETTS	A. M. Quimby, M. D.	90	2	12	1,400	1,363	No.	10	C. S.	20
31	MICHIGAN	Michigan Asylum	80	2	30	1,850	1,925	No.	8	H. S.	21-30
32	MICHIGAN	Newberry State Hospital	27	24	4	825	825	No.	94	1 year H. S.	19
33	MICHIGAN	Eastern Michigan Asylum	50	2	1	1,435	1,380	No.	16	C. S.	20-32
34	MINNESOTA	Fergus Falls State Hospital	20	3	6	1,835	1,613	Yes	10	C. S.	18-35
35	MINNESOTA	Rochester State Hospital	80	2	16	1,120	1,120	No.	12	C. S.	20
36	MINNESOTA	St. Peter State Hospital	61	3	13	1,075	1,002	Yes	12	C. S.	19-27
37	NEBRASKA	Lincoln State Hospital	26	2	6	700	600	No.	14	C. S.	18-35
38	NEBRASKA	Norfolk State Hospital	11	24	6	342	316	No.	10-12	C. S.	21-35
39	NEW HAMPSHIRE	New Hampshire State Hospital	60	2	13	1,114	1,114	No.	10	C. S.	21-35

1 Abbreviations used: C. S. - Common school. H. S. - High school.

TABLE 5.—Statistics of schools for the training of professional nurses, for the school year 1910-11—Class B—Continued.

Location.	Name of school or hospital with which it is connected.	Superintendent of nurses.	Students enrolled.	Years in course.	Graduates in 1911.	Capacity (beds).	Average daily number of patients.	Are students sent into families during training?	Daily number of hours on duty.	Requirements for admission.	
										Education. ¹	Age.
1	2	3	4	5	6	7	8	9	10	11	12
NEW JERSEY.											
40	Cedar Grove.....	Essex County Hospital for the Insane.	40	2	12	1,500	1,350	Yes....	15		21
41	Greystone Park.....	New Jersey State Hospital.	68	2	12	2,200	2,200	Rarely.	16	C. S.	21
42	Trouton.....	New Jersey State Insane Hospital.	21	2	11	1,400		No....	16		20-25
43	Vineland.....	New Jersey Training School.	8	2		40					
NEW YORK.											
44	Binghamton.....	Charles G. Wagner, M. D.	28	3	8	2,202	2,208	Rarely.	11 ¹	1 year H. S.	20
45	Brooklyn.....	Edwin Chase.....	28	2	6	788	741	No....	11	1 year H. S.	21
46	Buffalo.....	Arthur W. Baird, M. D.	28	2	19	1,000	1,063	Rarely.	10	C. S.	18
47	Central Islip.....	George A. Smith, M. D.	47	2	14	4,300		No....	16 ¹	H. S.	21-26
48	Gowanda.....	Daniel H. Arthur, M. D.	26	2	11	1,100	1,072	Rarely.	11		18
49	Kings Park.....	William Austin Macy, M. D.	24	2	13	3,464	3,226	No....	12	1 year H. S.	18
50	Middletown.....	Marjorie C. Ashley, M. D.	24	2	14	2,020	2,000	No....	12	1 year H. S.	19
51	New York City.....		25	2	15	4,400	4,468	No....	12 ¹	8th grade.	19
52	Ogdensburg.....		42	2	12	3,000	2,924	No....	11	C. S.	18
53	Poughkeepsie.....		27	2	16	1,464	1,401	No....	11 ¹		18
54	Rochester.....		48	2	24	1,443	1,400	No....	12 ¹		18
55	Utica.....		40	2	11	2,422	2,366	No....	10		18-25
56	Willard.....		27	2 ¹							
OHIO.											
57	Cleveland.....	Charles H. Clark, M. D.	45	2	13	1,605	1,606	No....	12	C. S.	21
58	Columbus.....	Oral G. Perkins.	26	2	17	1,720	1,723	No....	13	C. S.	21
59	Mansfield.....	Mary Wade.	40	2	16	1,000	1,000	No....	16 ¹	C. S.	21-25

UNITED STATES BUREAU OF EDUCATION

BULLETIN, 1912: NO. 8 WHOLE NUMBER 476

PEACE DAY

(MAY 18)

SUGGESTIONS AND MATERIAL FOR ITS
OBSERVANCE IN THE SCHOOLS

Compiled by FANNIE FERN ANDREWS

SECRETARY OF THE AMERICAN SCHOOL
PEACE LEAGUE

WASHINGTON
GOVERNMENT PRINTING OFFICE

1912

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LETTER OF TRANSMITTAL.

DEPARTMENT OF THE INTERIOR,
BUREAU OF EDUCATION,
Washington, D. C., March 5, 1912.

SIR: Among the many movements of modern times for the advancement of civilization and the relief of humanity from unnecessary burdens of expenditure and of paralyzing fear, none is more significant than that for arbitration and world-wide peace. This movement has, I believe, been made possible by the education of the masses of the people in all the more progressive countries of the world, and will succeed finally only as education becomes more universal. Like all great constructive movements for the uplift and freedom of the people, it must depend on the intelligence and understanding of the people themselves. To any such end no agency is more effective than that which works through the schools, in which the citizens of the future are gathered during their formative years. Because of the constant increase in the number of children in our schools, it is increasingly true that whatever we would have in the nation of to-morrow we should put into the schools of to-day. In these workshops of humanity the future is formed and determined to an extent and degree greater than anywhere else.

In this movement for international arbitration and peace the schools are interested for another reason. The cost of war and of armed peace is still larger in the civilized countries of the world than the cost of schools and of other formal means of education. Were it possible to deliver the world immediately from this burden of an outgrown and antiquated institution by bringing in the reign of reason, good will, and constructive cooperation, the opportunities for education might at once be increased from two to four fold throughout the world without any increase in the total burden of taxation.

One of the most effective ways of fixing the attention of children and making lasting impressions on their minds is through well-arranged and attractive programs for days set apart for special purposes. For these days children and teachers make unusual preparation. Facts and principles are committed to memory, never to

be forgotten, and are emotionalized and vitalized by poetic sentiment, music, and song. The whole is emphasized probably by one or more addresses made by prominent citizens of the community. Such a program is that prepared, at my request, by Mrs. Fannie Fern Andrews, secretary of the International School Peace League, organized and maintained for the purpose of fostering the propaganda of peace through the schools. In 1906 the Commissioner of Education, Dr. Elmer Ellsworth Brown, recommended that the 18th day of May, the anniversary of the assembling of the first Peace Conference at The Hague, should be observed as Peace Day in the schools. If observed at all, it should be in an intelligent and fitting way. For this teachers need help. To offer such help is a proper function of the Bureau of Education. I therefore recommend the publication of this program as a bulletin of the Bureau of Education and suggest that all or portions of it be reprinted by State departments of education in sufficient quantities to supply all the teachers in the several States.

Very respectfully,

P. P. CLAXTON,
Commissioner.

The SECRETARY OF THE INTERIOR.

SUGGESTED PROGRAM FOR THE EIGHTEENTH OF MAY.

MUSIC.

Recessional.

**Music: De Koven.
Words: Kipling.**

RECITATION.

Ring out the Old; Ring in the New.

Tennyson.

READING.

By sixteen pupils.

(a) The Dawn of World Peace.

William Howard Taft.

(b) The Significance of the Eighteenth of May.

Fannie Fern Andrews.

MUSIC.

These Things Shall Be.

**Tune: Duke Street.
Words: Symonds.**

Oh, Beautiful, My Country.

Tune: Webb.

RECITATION.

Tubal Cain.

Charles Mackay.

QUOTATIONS.

What Soldiers and Statesmen Have Said about War.

MUSIC.

Hear, O ye Nations.

**Tune: Lyons.
Words: F. L. Hosmer.**

Keller's American Hymn.

Chorus, Angel of Peace.

O. W. Holmes.

America.

S. F. Smith.

PEACE DAY—MAY 18.

SUGGESTIONS AND MATERIAL FOR ITS OBSERVANCE IN THE SCHOOLS.

THE DAWN OF WORLD PEACE.

By WILLIAM HOWARD TAFT.

The development of the doctrine of international arbitration, considered from the standpoint of its ultimate benefits to the human race, is the most vital movement of modern times. In its relation to the well-being of the men and women of this and ensuing generations, it exceeds in importance the proper solution of various economic problems which are constant themes of legislative discussion or enactment. It is engaging the attention of many of the most enlightened minds of the civilized world. It derives impetus from the influence of churches, regardless of denominational differences. Societies of noble-minded women, organizations of worthy men, are giving their moral and material support to governmental agencies in their effort to eliminate, as causes of war, disputes which frequently have led to armed conflicts between nations.

The progress already made is a distinct step in the direction of a higher civilization. It gives hope in the distant future of the end of militarism, with its stupendous, crushing burdens upon the working population of the leading countries of the Old World, and foreshadows a decisive check to the tendency toward tremendous expenditures for military purposes in the Western Hemisphere. It presages at least partial disarmament by Governments that have been, and still are, piling up enormous debts for posterity to liquidate, and insures to multitudes of men now involuntarily doing service in armies and navies employment in peaceful, productive pursuits.

Perhaps some wars have contributed to the uplift of organized society; more often the benefits were utterly eclipsed by the ruthless waste and slaughter and suffering that followed. The principle of justice to the weak as well as to the strong is prevailing to an extent heretofore unknown to history. Rules of conduct which govern men in their relations to one another are being applied in an ever-increasing degree to nations. The battle field as a place of settlement of disputes is gradually yielding to arbitral courts of justice. The

interests of the great masses are not being sacrificed, as in former times, to the selfishness, ambitions, and aggrandizement of sovereigns, or to the intrigues of statesmen unwilling to surrender their scepter of power. Religious wars happily are specters of a medieval or ancient past, and the Christian Church is laboring valiantly to fulfill its destiny of "Peace on earth."

If the United States has a mission, besides developing the principles of the brotherhood of man into a living, palpable force, it seems to me that it is to blaze the way to universal arbitration among the nations, and bring them into more complete amity than ever before existed. It is known to the world that we do not covet the territory of our neighbors, or seek the acquisition of lands on other continents. We are free of such foreign entanglements as frequently conduce to embarrassing complications, and the efforts we make in behalf of international peace can not be regarded with a suspicion of ulterior motives. The spirit of justice governs our relations with other countries, and therefore we are specially qualified to set a pace for the rest of the world.

The principle and scope of international arbitration, as exemplified in the treaties recently negotiated by the United States with Great Britain and France, should commend itself to the American people. These treaties go a step beyond any similar instruments which have received the sanction of the United States, or the two foreign powers specified. They enlarge the field of arbitrable subjects embraced in the treaties ratified by the three Governments in 1908. They lift into the realm of discussion and hearing, before some kind of a tribunal, many of the causes of war which have made history such a sickening chronicle of ravage and cruelty, bloodshed and desolation.

THE COST OF WAR.

By DAVID STARR JORDAN.

International war has been the primal curse of the European world. It has virtually come to an end, because of its tremendous cost. The nations of Europe are in the grasp of gigantic debts which devour all the sums which can be raised through taxation. No war can be fought save on borrowed money, and the great international bankers, the "Unseen Empire of Finance," do not willingly loan money to one nation, to be used in destroying their own investments in bonds and properties of another nation. The most powerful of the reigning houses of Europe is the house of Rothschild, which in its great central offices in London, Paris, Berlin, Vienna, and Amsterdam, determines by its silent nod the questions of war and peace among the nations of

Europe. To control the operations of nations it is not necessary to own them. It is needful only to control their debt.

War debt began with the nineteenth century. Not until the establishment of constitutional government had nations any credit in the world of finance. The bond of a king was notoriously bad security. Since 1800 the war debts of the nations have grown by leaps and bounds. That of Europe as a whole amounts to more than \$26,000,000,000, bearing interest at the rate of \$1,150,000,000 per year. The debt of France is nearly \$6,000,000,000; that of Russia, \$5,000,000,000; that of the United Kingdom, \$3,700,000,000; that of Germany, including the debts of Prussia and Bavaria, nearly the same; that of Italy, \$2,800,000,000; that of Spain, \$1,800,000,000; that of Japan, \$1,300,000,000. All these "endless caravans of ciphers" represent sums which have never been paid, will never be paid, can never be paid so long as the present system of national armament goes on. For practically the entire amounts now raised by taxation in civilized nations go into the support of armies and navies. The United States, in splendid isolation from old entanglements, without an enemy in the world, and bound by ties of blood and commerce to all civilized nations, spends 73 per cent of her income in this way. The civil, or nonmilitary, expenditures of Europe are so small as to be negligible.

ANNUAL ARMAMENT BUDGETS OF 10 NATIONS.

Countries.	Fiscal year.	Expended for Army.	Expended for Navy.	Total military charge.
Austria-Hungary.....	1909	24 00	51 00	\$82,265,000
France.....	1910	16 00	6 00	232,868,000
Germany.....	1910-11	17 00	3 00	216,975,000
Great Britain.....	1909-10	13 00	17 00	312,890,000
Italy.....	1909-10	6 00	3 00	86,672,000
Japan.....	1909-10	3 00	1 00	53,808,000
Russia.....	1910	24 00	4 00	248,982,000
Spain.....	1910	3 00	1 00	39,085,000
Turkey.....	1909	1 4 00	1 00	55,197,000
United States.....	1909-10	15 00	12 00	232,147,000
Total.....		1,127,687,000	628,202,000	1,655,889,000

¹ Whitaker's Almanack, 1910.

² Almanac de Gotha, 1910.

The total annual military expenditures of the world approximate \$2,250,000,000.

The cost of militarism in the whole world is nearly \$4,000,000,000 yearly in the time of peace. In time of actual war the waste is incalculable. Well may Bastiat observe that, "War is an ogre who devours as much when he is asleep as when he is awake."

THE COST OF ARMED PEACE.

Could the money which the United States expends annually for military defense be used for education, the sum would be sufficient to accomplish the following things:

To establish and maintain a great national university with an annual income of ten million dollars, which is three times as much as the income of the wealthiest of the universities in this country;

To establish and maintain in each of the States a new university with an annual income of one million dollars;

To establish and maintain an average of one hundred new public high schools for each of the States, each school having an annual income of twenty thousand dollars;

To establish and maintain an average of five new normal schools for each of the States, each school having an annual income of one hundred thousand dollars;

To establish and maintain an average of five new technological schools for each of the States, each school having an annual income of one hundred thousand dollars;

To establish and maintain an average of thirty new agricultural schools for each of the States, each school having an annual income of fifteen thousand dollars;

To add one million dollars annually to the common school fund of each of the States;

To purchase textbooks for all pupils in all of the schools, public and private, in all of the States of the Union;

To give to each of the States of the Union annually a quarter of a million dollars for public libraries.

At the present rate of expenditure the four countries of Germany, France, Great Britain, and the United States will spend in the next 40 years, the life of one generation, for the support of armies and navies an amount sufficient to build twenty million country and village houses at an average cost of two thousand five hundred dollars each. With father, mother, and four children in each of these houses they would furnish homes for one hundred and twenty millions of people, which is more than the total present population of these four countries living in villages and the open country. Thus the fear of war is consuming the homes of the rural and village population of these great nations in a single generation.

It is estimated that the total direct cost of the armies and navies of the world each year in time of peace is two and one-half billion dollars, which equals the total valuation of the wheat and corn crops of the whole of the United States.

The total direct and indirect cost of the military system of the world, including interest on war debts, pensions to soldiers, and the

loss of time of men engaged in an occupation which produces no wealth is almost equal each year to the market value of all the crops of all kinds grown in all the fields in all of the States of the Union.

So much do we and so much does the world pay for what would be unnecessary if all the nations would agree to arbitrate their differences and to live in peace and unselfish cooperation. The children in the schools of the world to-day can, if they will, bring about such a condition to-morrow and relieve the world of the great evil and desolation of war and of the great and unnecessary burden of armed peace.

THE SIGNIFICANCE OF THE EIGHTEENTH OF MAY.

By MRS. FANNIE FERN ANDREWS.

On the Eighteenth of May, 1899, an event took place which will always be remembered as a landmark in the history of mankind. Unlike most of the world happenings, this occurrence affects equally every civilized nation on the globe, and it is necessary, therefore, that everybody should understand its meaning. The anniversary of this event has already been observed in many countries, and, like Christmas, the Eighteenth of May is destined to become a great international day, which will proclaim good will among all men.

In August, 1898, people all over the world were surprised by a letter which the Czar addressed to the nations that were represented at the Russian Court. This letter was an invitation to send delegates to a meeting which should consider what could be done to keep nations from going to war with each other. The Czar stated in his letter that, for the best welfare of the world, the nations ought to restrict themselves in the spending of such enormous sums of money for armies and navies.

THE CZAR'S PLAN FOR PEACE.

The Czar had been considering this matter for some time. He, however, was not the only ruler who had thought seriously about this condition of affairs, and his invitation to attend a peace conference met with unanimous response. Every Government invited accepted, and this included all the nations of Europe, 20 in number, 4 from Asia, and 2 in America, the United States and Mexico.

On account of the unique nature of the conference, the Czar thought it best not to hold it in the capital of any one of the Great Powers, where so many political interests are centered. He felt that this might hinder the work in which all the countries of the world were equally interested. Holland was selected as the country most

admirably adapted for such a meeting. It was announced to the Governments that the Queen of the Netherlands would offer hospitality to the conference, and accordingly the Netherlands minister of foreign affairs sent out a formal invitation to the Governments to meet at The Hague.

THE YOUNG QUEEN'S INVITATION.

The young Queen, who was then only 18 years old, to show her appreciation of the honor conferred on her country, and of the deep meaning of the conference, placed at its disposal the most beautiful and historical building in the land. The conference was, therefore, held in the widely famed House in the Woods, formerly the summer residence of the royal family, situated in a very beautiful park about a mile from the city.

This was a most remarkable gathering, for each nation had sent its greatest statesmen. Then, too, it was the first time in the world's history that a peace conference had been held by the nations.

THE HOUSE IN THE WOODS.

When these one hundred delegates, representing 26 of the most important nations of the world, came together on the eighteenth of May, 1899, it was fitting that their meeting place should be noted in history, since they were destined to become the historic figures of a great event in world affairs. The large ballroom, known as the Orange Zaal, was designated for the general meetings. The walls and dome of this hall are covered with immense paintings. One of these, over the front entrance, represents Peace descending from Heaven, and apparently entering the hall. M. de Beaufort, the honorary president of the conference, referred to this in his opening address, and expressed the hope that Peace, having entered the hall, would go forth to bless the whole world. The other large rooms on the main floor, handsomely furnished with beautiful Chinese and Japanese hangings, with the walls and ceilings finely frescoed, were given up to committees, into which the whole conference was divided. Upstairs, there was a dining room, in which the Dutch Government served a most bounteous lunch to the delegates every working day of the conference.

TOPICS DISCUSSED.

Baron de Staal, head of the Russian delegation, was appropriately chosen president. Three main topics had been proposed for discussion, and these were assigned to three large committees. The first was in charge of the question of armaments. Though the Czar had called the conference chiefly to consider how the nations might be relieved from spending such vast sums of money for their armies and navies, the committee which had this matter in charge found that the

time had not yet come for deciding this burning question. The nations, they thought, must first agree not to go to war before they could be induced to give up their implements of war. The committee, therefore, came to no positive agreement. They unanimously expressed the belief, however, that if the nations would stop spending such a large part of their incomes for armaments it would be a blessing to mankind. This was greatly to be desired, they said. They also expressed the hope that the Governments would study this question, so that they might come to some future agreement. The second committee, that on the laws of war, adopted new rules which make war on land less barbarous and extends the Red Cross to naval warfare.

CHOOSING AN UMPIRE.

The key to the whole subject, and that which became the most important part of the program, is how to end a dispute before war begins. Many differences between nations have been settled without war by calling in a third party, just as an umpire on the ball field is called upon to decide which side is in the right. Wouldn't it look ridiculous if the two teams in a ball game should, every time a disputed point arose, stop the game and go to fighting to settle the matter? And how would it look to the spectators to see the advantage given to a side merely because it was stronger in the fist scramble? And yet this is exactly what nations do which go to war to settle disputes. How stupid to think that might can settle who is in the right.

WAR NO LONGER NECESSARY.

These great statesmen at The Hague, who composed the third committee, recognized the folly of such a method of settling disputes and adopted a plan which encourages the nations to refer all their disputes to an umpire or arbiter—in other words, to submit their differences to arbitration. In fact, the plan which this committee adopted makes it absolutely unnecessary for nations to go to war with each other in the future. What an important plan. To save for the people of the world over \$2,000,000,000 a year, not to speak of the suffering and misery which war always brings. In the nineteenth century more than 14,000,000 able-bodied men were sacrificed in war.

The committee on arbitration divided its work into three parts. It said, first, that if two nations have a dispute, serious enough to cause war, they might call in another nation or nations who would view the matter with them in an impartial light and thus try to bring about a friendly settlement. A further important statement was made—that one or more powers, strangers to the dispute, might, of their own free will, offer their assistance. This provision, called

"Special Mediation by Neutral Powers," certainly meant a great change in the attitude of nations toward each other.

THE PEACE OF PORTSMOUTH.

Before this rule was adopted any offer on the part of any nation to intercede or intervene between two powers at variance would have been considered an unfriendly act and would probably have occasioned jealous distrust. We can see how important this provision is by the action of President Roosevelt, who, during the war between Russia and Japan, invited these two powers to send delegates to a meeting which he hoped might bring about the end of one of the most terrible wars in history. During this conference, which was held in Portsmouth, N. H., and which ended in the Peace of Portsmouth, the peoples of the world looked on with interest and sympathy and it was the common hope that war should cease.

The second part of the plan, which the committee on arbitration adopted, stated that a useful method of avoiding war between nations might be to appoint committees composed of men from other countries, which should inquire into the disputed case. Such committees were called "International Commissions of Inquiry." For a long time the delegates discussed this matter, and it seemed almost as if they would come to no agreement. The act was finally approved, however, although it was stated that only those cases which had nothing to do with the honor or essential interests of a nation would be considered as coming under this rule.

THE "DOGGER BANK AFFAIR."

But six years after the conference adjourned, this provision enabled the powers of Great Britain and Russia to settle speedily and peacefully a grave dispute which had arisen between them. When, during the Russian-Japanese war, the Russian fleet fired on the British fishing vessels, there was great excitement in England. Before 1899 she might have plunged into war, for her honor had been touched. Her citizens had been fired on by a foreign fleet. But under this rule of inquiry, England could honorably refer this matter to an investigating committee. One was appointed, which proved that the Russian ship had mistaken the British fishing vessels for the Japanese fleet. The committee recommended that an indemnity of \$350,000 be paid by the Russian Government to the families of the English fishermen. This was gladly done and both sides were satisfied with the outcome of this unhappy occurrence. The "Dogger bank affair," as this was called, will always be regarded as an important event in world affairs.

THE HAGUE COURT OF ARBITRATION.

But the crowning glory of the Committee on Arbitration, and, indeed, of the first peace conference, was the establishment of a court where nations in dispute could take their cases and have them tried, just as people living in the various countries can refer their controversies to the courts for settlement. This court was to be the umpire or arbiter, and, therefore, it was called the International Court of Arbitration. Since this is situated at The Hague, it is sometimes called The Hague Court of Arbitration. The importance of this court was well understood by those far-sighted statesmen, who adopted every measure possible which could make the court useful to nations. They passed a rule saying that it was the duty of each power to remind disputants that the court existed. This has well proved its worth, for since it was opened in April, 1901, eleven important cases of international controversy, representing nearly every great nation of the world, have been settled by its judges. The American people like to remember that it was the United States and Mexico that took the first case there.

THE HAGUE PALACE OF PEACE.

The future headquarters of the International Court of Arbitration is situated on the avenue leading from The Hague to Scheveningen. At present the passer-by sees nothing but a great forest of scaffolding, which is to be seen on the left, a little distance from the road. Among the scaffold poles, however, is rising the Palace of Peace, toward the erection and maintenance of which Mr. Andrew Carnegie gave the Netherlands Government the sum of \$1,500,000. The corner stone of this building was laid at the time of the second Hague conference in 1907.

The use of this court has convinced the nations more and more that arbitration is the only sane and sensible way of settling international difficulties, and since the first Hague conference over a hundred agreements have been made between nations to submit certain classes of disputes to arbitration. Thirty-six nations have thus expressed their desire to use the court, while the United States is a party to twenty-five of these treaties.

GIFTS OF THE NATIONS.

All countries are contributing to the adornment of the palace. Great Britain gives the four stained-glass windows of the Great Court; France a picture by Besnard for this court, and Gobelins tapestries, designed by Luc O. Mercon, for the small; the Dutch Government a collection of paintings, by Ferdinand Bol, for a room over the Small Court and seven stained-glass windows for the staircase; Germany the monumental entrance gates to the grounds; Italy

part of the marble for the corridor; Austria the bronze and crystal candelabra; Norway the granite for the entrance slopes; Sweden, granite for the basement and certain columns; Denmark the porcelain for the fountain in the courtyard; Switzerland the works of the clocks; Russia a jasper vase, over 11 feet high, for the central hall; the United States a large marble group representing the purpose of the building, "Peace through Justice," for the first landing of the staircase; Mexico, onyx for the staircase; Belgium (probably) the bronze doors of the building; and Japan some gold-embroidered tapestries for the room of the administrative council, which is paneled in wood from Brazil.

The laying out of the grounds, which will contribute much to the beauties of the palace, will be in the hands of Mr. Thomas H. Mawson, of London, whose design shows a judicious blending of formal vistas with the natural beauties of the wood.

THE ARBITRATION TREATIES NEGOTIATED BY THE UNITED STATES WITH GREAT BRITAIN AND FRANCE

The arbitration treaties negotiated by the United States with Great Britain and France enlarge the field of arbitrable subjects embraced in the treaties ratified by the three Governments in 1908. The treaties provide for reference to The Hague, or a similar tribunal, questions which have heretofore been left entirely to diplomatic negotiation. They provide for the creation of a Joint High Commission, to which shall be referred any controversy between this Government, on the one hand, and Great Britain or France, on the other, before such controversy has been submitted to an arbitral body from which there is no appeal. Moreover, the treaties provide that reference of a controversy to the Joint High Commission may be deferred for one year, thus allowing diplomatic adjustment without an appeal to the commission.

The Joint High Commission, according to the treaties, consists of three representatives from each Government concerned in the dispute. The commission is empowered to report to the respective Governments its recommendations and conclusions, and then the matter is ready for final arbitration. The Senate of the United States, concurring with the President, has the power to determine for this country if the case shall go to The Hague Court. Thus, under these treaties, the United States may go directly to the Court of Arbitration at The Hague or to the Joint High Commission. The report of this commission is not binding, except where opinions differ as to whether or not the question at issue is subject to arbitration under the first article of the treaties. If such is the case, five out of six members of the commission must so decide and the verdict is conclusive upon both Governments.

THE SECOND PEACE CONFERENCE.

The results of the first peace conference are far greater than the world ever dreamed of. And perhaps the greatest result of all was the calling of a second peace congress, which was held in 1907, and which included practically all the nations of the world.

Fourteen decisions were agreed upon by this conference, but the most important was the one which concerned the Hague Court. This world umpire, situated at The Hague, had shown its ability to settle any dispute that might arise between nations; but the second peace conference made this doubly assured. These statesmen decided that, in case of a conflict between two powers, either of them might go to the court and ask to have the difference settled, even though the other were unwilling to have the case referred. This was indeed a great improvement over the rule made by the first peace conference, which compelled both nations to agree to submit their difference to the court before it could be tried. Our American delegates at The Hague, who brought this matter up, believed that no nations would refuse to allow the case to go before the court when the request of the other was thus made public to the whole world.

A SUPREME COURT OF THE WORLD.

Our American delegates in the second Hague conference urged very strongly the establishment of a permanent international court, which should be to the nations of the world what our Supreme Court is to the States of the United States. Eight years before, at the first peace conference, the delegates thought that it would be perfectly impracticable to have such a court, but this conference decided unanimously that it was not only practicable but very desirable. Everything was agreed upon which should make the court a reality except the method of selecting judges. This matter will undoubtedly be settled before long. As Ambassador Choate and Secretary Hay said in their report to the United States Government, "a little time, a little patience, and the great work is accomplished."

THE THIRD PEACE CONFERENCE.

Perhaps the greatest service which the second peace conference gave to the world was its decision in favor of holding regular conferences. This not only laid the foundation for a Parliament of the Nations, which has been the dream of poets and statesmen for the past three centuries, but, by its vote providing for a third conference, it has really started the most important institution in promoting the peace of the world. It was Secretary Root who first proposed that the second conference should arrange for the holding of regular ones in the future, and as the vote was passed, a third peace conference will probably convene in the summer of 1915.

THE HAGUE TRIBUNAL.

ADMINISTRATIVE COUNCIL.

President—The minister of foreign affairs of the Netherlands.

Members—The diplomatic representatives of the signatory powers accredited to The Hague.

MEMBERS OF THE COURT.

The court consists of a panel of 130 eminent jurists appointed by 40 sovereign countries, each country appointing from one to four members. The judges in any given case are selected from this list.

The members from the United States are—

John W. Griggs, formerly Attorney General of the United States.

George Gray, United States Circuit Judge, formerly United States Senator.

Oscar S. Straus, formerly Secretary of Commerce and Labor, ambassador extraordinary and plenipotentiary at Constantinople.

The countries represented are—

1. Argentina.	15. Germany.	29. Portugal.
2. Austria-Hungary.	16. Great Britain.	30. Roumania.
3. Belgium.	17. Greece.	31. Russia.
4. Bolivia.	18. Guatemala.	32. Salvador.
5. Brazil.	19. Hayti.	33. Servia.
6. Bulgaria.	20. Holland.	34. Spain.
7. Chile.	21. Italy.	35. Sweden.
8. China.	22. Japan.	36. Switzerland.
9. Colombia.	23. Luxemburg.	37. Turkey.
10. Cuba.	24. Mexico.	38. United States.
11. Denmark.	25. Nicaragua.	39. Uruguay.
12. Dominican Republic.	26. Norway.	40. Venezuela.
13. Ecuador.	27. Peru.	
14. France.	28. Persia.	

THE NOBEL COMMITTEE.

The Nobel Committee consists of five members of the Norwegian Parliament, and this committee determines each year who shall receive the forty-thousand-dollar prize left by the will of Alfred Nobel, the inventor of dynamite, to be given to the man or woman who has done the most for peace during the year. The award is made each year on December 10, the date of the founder's death. The prize winners thus far are:

1901—Henri Dunant, Swiss, and Frederic Passy, French.

1902—E. Ducommun and A. Gobat, both Swiss.

1903—W. R. Cremer, English.

1904—The Institution of International Law, the first award to an institution.

1905—Baroness von Suttner, Austrian.

1906—President Theodore Roosevelt, American.

1907—Ernesto Teodoro Moneta, Italian, and Louis Renault, French.

1908—K. P. Arnoldson, Swede, and M. F. Bajer, Dane.

1909—Baron d'Estournelles de Constant, French, and Auguste Beernaert, Belgian.

1910—The International Peace Bureau, at Berne.

1911—Tobias Michael Carel Asser, Belgian, and Alfred Fried, Austrian.

THE INTERPARLIAMENTARY UNION.

The Interparliamentary Union was founded in 1888 by the English carpenter, William Randall Cremer, since crowned with the Nobel peace prize. It is open to all men who have been members of national parliaments. It deals primarily with questions of international law and peace. It has met almost every year since it was founded, and its proceedings have ever been a source of inspiration to the world statesman and peace advocate. It is responsible, directly or indirectly, for the calling of both the first and second Hague conferences. It now has a membership of some three thousand; and when it is remembered that there are only about fifteen thousand legislators who sit in the national parliaments of the world, it is seen that already one in every five is committed to the peace idea. Should the union grow anywhere near so fast in the future as it has grown in the past, it will not be a very long time before the nations can, if they desire, actually vote peace on earth. Over two hundred members of the United States Congress are now represented in the Interparliamentary Union, and Mr. Richard Bartholdt, of Missouri, is chairman of the American group.—HAMILTON HOLT, in *The World's Work*, March, 1911.

THE CARNEGIE ENDOWMENT FOR INTERNATIONAL PEACE.

Through the great benefaction of Mr. Andrew Carnegie, who has transferred to a board of trustees bonds valued at \$11,500,000 as a permanent fund for the promotion of peace, the world has now in its possession a powerful engine for the accomplishment of world peace. This endowment furnishes the means for a systematic effort to reach the public opinion of the world by scientific argument and exposition.

The trustees of the endowment are to carry on their work in three divisions: International law, Economics and history, and Intercourse and education. These three divisions represent the juristic, the economic, and the educational aspects of the problem. The division of international law is under the direction of James Brown Scott; the second division under John Bates Clark, of Columbia University; and the third has, as acting director, Nicholas Murray Butler.

EDUCATIONAL WORK FOR PEACE.

At the Mohonk Conference of 1905 Dr. Daniel C. Gilman initiated a movement for the introduction of peace propaganda into colleges and universities. At the conference of that year a committee on colleges and universities was appointed, of which Benjamin Ide Wheeler, E. A. Alderman, James B. Angell, Seth Low, L. Clark Seelye, and Andrew D. White are members. The correspondence with colleges has been carried on by H. C. Phillips, corresponding secretary of the Mohonk Conference. Through the influence of this committee, over 250 colleges and universities are observing Peace Day, several are giving special lectures on the peace movement, and many have arranged for debates and oratorical contests on the subject.

The Intercollegiate Peace Association, due to the initiative of President Byers, of Goshen College, and Prof. Russell, of Earlham College, is composed of representatives of about 70 colleges and universities of the Middle West, "united for the promotion of organized activities among the students and educators in support of the international arbitration and peace movement." The main work of the association consists of intercollegiate and interstate oratorical contests for prizes upon subjects representing different phases of the question of international peace.

A very important movement is that represented by the National Association of Cosmopolitan Clubs, which had its beginning in 1903 at the University of Wisconsin. At that time an International Club, composed of 16 foreign and 2 native students, was formed. In 1907 the National Association of Cosmopolitan Clubs was organized for the purpose of "bringing closer together men from different countries to learn the customs, viewpoints, and characteristics of other nationalities, to remove national prejudices, and to establish international friendships." To-day there are over 30 of these clubs, representing as many colleges. In these clubs the membership consists of not more than one-half American students, and in some cases 20 or more nations are represented in the foreign membership.

The American School Peace League was the outcome of the First National Peace Congress, held in New York in 1907. At this congress a young people's meeting was held, consisting of about five

thousand delegates from the public and private schools of New York City. William H. Maxwell presided, and addresses were made by Baron d'Estournelles de Constant, of the French Senate; William T. Stead, of London; William H. Maxwell, and Nathan C. Schaeffer. At the close of the meeting a committee was appointed to work out a plan to interest teachers in the general international movement. The final result of the committee's action was the American School Peace League, which was organized in 1908. Its aim is "to promote, through the schools and the educational public of America, the interests of international justice and fraternity."

The league is organized on the basis of State branches, numbering 28, which hold their annual meetings at the time of the conventions of the State teachers' associations. In some of the States branches have been formed in high and normal schools and colleges. These branches usually hold their annual meetings near the Eighteenth of May, and in many cases provide the program for the Eighteenth of May observance.

The following is the plan for State branch work adopted by the executive committee of the league:

1. To reach all educational gatherings and summer schools of the State with good speakers and the distribution of literature.

2. To reach the educational and daily press of the State, and to supply school papers with interesting articles.

3. To place peace literature in public, school, college, and traveling libraries; to encourage the organization of study circles for the purpose of working out practical helps for teachers; to include peace literature in study-circle lists.

4. To encourage superintendents to make history courses which shall have a broad and sympathetic world outlook.

5. To procure the observance of the Eighteenth of May.

6. To encourage the organization of branch leagues in high and normal schools.

7. To encourage orations and essays on international peace.

The interest in the promotion of the ideas of the league is not confined to this country. Ministers of education and prominent educators in most of the countries of Europe have indorsed the plans outlined in the league's activities and have expressed willingness to cooperate in a world-wide plan for developing international standards in teaching, especially the subject of history. The league has been active during the past two years in organizing an International Educational Council; and, resulting from the two European visits of the secretary, two representatives of the council have been secured in 12 different countries. The international exchange between the British teachers' associations and the National Education Association is a striking example of the trend of educational thought. In fulfilling

the purpose of the resolution passed by the National Education Association last July, the secretary of the league was received by the various teachers' associations of Great Britain last autumn and met with the unanimous support of the project for an international council. Michael Sadler, former secretary of the board of education, and Sir James Yoxall, secretary of the National Union of Teachers of Great Britain and Ireland, are the two representatives from Great Britain. All cooperation, then, in this direction is a part of a world-wide plan for promoting international friendliness.

The method of the league is to secure the interest of teachers in the broad idea of international good will, and to stimulate their study of the events in world politics which affect the political status of the United States in international affairs. All this is founded on a deep-rooted sentiment against the ineffectiveness and the unreasonableness of war in settling international difficulties, and on the substitution of judicial procedure. This, in turn, has developed a new point of view in the interpretation of historical events, which places the emphasis in history teaching on the causes and results of wars rather than on the details of battles and military campaigns, and on the social and industrial conditions of life. It is this kind of teaching in the schools which the league, through its committee on teaching history, is urging. The second paragraph of the resolution which Miss Kate Stevens brought from the Teachers' Guild of Great Britain and Ireland expresses very well the principles of the American School Peace League in reference to teaching history:

The council are convinced that teachers have more opportunities than any other persons of promoting and developing in the young the sense of brotherhood in the human race, toward which the United States and Great Britain are working, through the teaching of history, and look forward with much hope to the early coming of the time when, in all countries, the fostering of patriotism will be combined with the inculcation of a broad and sympathetic world outlook in the history lesson. In such a way only can the desirable spirit be generally diffused through all civilized peoples.

The league is also of the opinion that children old enough to study history should be taught the events connected with the two Hague conferences. These represent the initiation of official international agreements, leading specifically toward international conciliation. The principles which prompted and governed these congresses have so impressed themselves upon the social, economic, and political life of nations that from now on they must form an integral part of the education of the people. It is logical, therefore, that the course of study should include the teaching of these events which are really affecting the life for which the schools are preparing. The league therefore urges the observance in the schools by appropriate exercises, of the anniversary of the opening of the First Hague Confer-

ence (the Eighteenth of May) as a particularly fitting time for such teaching. This is especially desirable, since the Eighteenth of May is now observed by many organizations and institutions all over the world.

RESOLUTIONS PASSED BY NATIONAL EDUCATION ASSOCIATION.

San Francisco, July, 1911.

The very material advance made in the cause of world peace during the past year encourages the National Education Association to urge a more widespread dissemination of knowledge upon this vital subject. We commend the American School Peace League as a channel through which teachers may procure such knowledge, together with suggestions for its presentation. The league has done excellent work in collecting and organizing material which appeals both to children and to adults; the accuracy of its statements is not questioned; its arguments are sound. The proposal to establish a world tribunal to fill the place of an international court for civilized nations is worthy of commendation and should have the earnest support of all teachers.

* * * * *

The National Education Association expresses its heartiest recognition of greetings borne to its members by Miss Kate Stevens, head mistress of the Montem Street Central Council School, London; from the Teachers' Guild of Great Britain and Ireland; from the National Union of Teachers; from the London Teachers' Association; from the London Head Teachers' Association; and from the Child Study Society of England.

The members of the association return in kind these cordial professional greetings, and join with their fellow-teachers of Great Britain and Ireland in the wishes expressed for the promotion of international good will and the early establishment of agencies for the settlement of international difficulties by arbitration. Further, we do hereby accredit Mrs. Fannie Fern Andrews, of Boston, Mass., secretary of the American School Peace League, as the delegate representative of the National Education Association to bear our return greetings to the organizations whose greetings Miss Stevens has brought to us.

PEACE PRIZE CONTEST.

Under the auspices of

THE AMERICAN SCHOOL PEACE LEAGUE.

Open to pupils of all countries.

Two sets of prizes, to be known as the Seabury prizes, are offered for the best essays on one of the following subjects:

1. *The opportunity and duty of the schools in the international peace movement.* Open to seniors in the normal schools of the United States.

2. *The significance of the two Hague Peace Conferences.* Open to seniors in the secondary schools of the United States.

Three prizes of seventy-five, fifty, and twenty-five dollars will be given for the three best essays in both sets.

This contest is open for the year 1912 to the pupils of the secondary and normal schools in all countries.

AMERICAN JUDGES.

David Starr Jordan, president Leland Stanford Junior University, Palo Alto, Cal.

Randall J. Condon, superintendent of schools, Providence, R. I.

Miss Edith C. Westcott, principal Western High School, Washington, D. C.

Miss Anna J. McKeag, professor of education, Wellesley College, Wellesley, Mass.

E. C. Warriner, superintendent of schools, Saginaw, Mich.

Ebenezer Mackey, superintendent of schools, Trenton, N. J.

William H. Elson, former superintendent of schools, Cleveland, Ohio.

L. J. Abbott, department of American history, Central State Normal School, Edmond, Okla.

Charles E. Chadsey, superintendent of schools, Denver, Colo.

Endicott Peabody, head master Groton School, Groton, Mass.

EUROPEAN JUDGES.

Henri La Fontaine, senator of Belgium, Brussels, professor of international law, president of the International Peace Bureau at Berne.

Ferdinand Buisson, member of the Chamber of Deputies, Paris, honorary professor at the University of Paris, honorary director of primary education to the minister of public instruction, Paris.

Kirchenrat Kroner, Stuttgart, Germany.

Count Angelo de Gubernatis, professor at the University of Rome, Italy.

Emile Arnaud, president of the International League of Peace and Liberty, vice president of the International Peace Bureau, president of the International Educational Commission of the Universal Peace Congress, Luzarches, France.

Contest closes March 1, 1912.

CONDITIONS OF THE CONTEST.

Essays must not exceed 5,000 words (a length of 3,000 words is suggested as desirable), and must be written, preferably in typewriting, on one side only of paper, 8 by 10 inches, with a margin of at least 1½ inches. Manuscripts not easily legible will not be considered.

The name of the writer must not appear on the essay, which should be accompanied by a letter giving the writer's name, school, and home address, and sent to Mrs. Fannie Fern Andrews, secretary American School Peace League, 405 Marlborough Street, Boston, Mass., not later than March 1, 1912. Essays should be mailed flat (not rolled).

The award of the prizes will be made at the annual meeting of the league in July, 1912.

Information concerning literature on the subject may be obtained from the secretary.

In 1911 95 essays were handed in from 28 States. The winners of the prizes follow :

NORMAL ESSAYS.

First prize—Matilda Srager, Plainfield, N. J.

Second prize—Inez P. Buxton, Plattsburg, N. Y.

Third prize—Beulah Peasley, Hortonville, Wis.

SECONDARY ESSAYS.

First prize—Harold A. Swank, Altoona, Pa.

Second prize—Louise Farrar Pennell, Seattle, Wash.

Third prize—Tully Stallard, Greenacres, Wash.

In addition to the above, the Lake Mohonk Conference on International Arbitration announced two sets of prizes to be awarded for similar work. These are as follows :

1. A first prize of \$200 and a second prize of \$100 for the best essays on "International Peace," by undergraduate women students of any college or university in the United States.

2. A prize of \$100 for the best essay on "International Arbitration," by an undergraduate man student of any college or university of the United States or Canada.

Full information concerning the conditions of the contest may be obtained from the secretary of the conference, Lake Mohonk, N. Y.

COURSE OF STUDY IN GOOD WILL.

[Arranged by the committee on methods of the Massachusetts branch of the American School Peace League.]

Subjects for the year.	Grade I, companions and pets.	Grade II, home life.	Grade III, school and play time.	Grade IV, our town or city.	Grade V, our country.	Grade VI, good citizenship.	Grade VII, the world family.	Grade VIII, the larger patriotism.
September.....	Kindness to playmates.	Helpfulness.....	Loyalty.....	The influence of the home.	Heroic virtues of early settlers.	Sympathy and courtesy.	National characteristics.	Interdependence of nations.
October.....	Kindness to animals.	Obedience.....	Perseverance.....	The influence of the school.	The contribution of each race to American life.	Honesty.....	National flags and songs.	Conservation of life, health, and natural resources.
November.....	Responsibility for cleanliness and care.	Trustworthiness in work.	Ways of service...	The care of public property.	Government by the people.	Courage to overcome difficulties.	What other nations have given to us.	Effects of war between nations.
December.....	The Christmas spirit.	Gratitude.....	Hospitality.....	The fireman and policeman.	The meaning of E Pluribus Unum.	Loyalty to truth..	Each nation's gift to the world.	Moral substitutes for war.
January.....	Faithfulness.....	Other homes than ours.	Respect for authority.	Public health.....	The responsibility of each citizen.	Devotion.....	National philanthropy.	Men who have contributed to the progress of civilization.
February.....	Kindness of great men.	Childhood of great men.	Fair play.....	Obedience to community laws.	Our great statesmen.	Self-control.....	Friendliness among American Republics.	World congresses and conferences.
March.....	Generosity.....	Keeping your word.	Good work.....	Loyalty to public officials.	Social service.....	Regard for civic beauty.	National honor....	Growth of law as an agency for promoting good will.
April.....	Kindness in manner.	Helpfulness to the old and feeble.	Cheerfulness under defeat and failure.	Good will among communities.	Patriotism.....	Everyday heroes..	Justice and honor between nations.	Treaties and arbitration.
May.....	Quarrelling and making peace.	Peace among the children.	Peace in the playground.	Good will among all classes of citizens.	Friendships with other nations.	Heroes of peace...	The Hague conferences.	Peace and good will through federation.
June.....	Protection and care of plants and flowers.	The golden rule...	Working together.	How can we help our community.	How can we serve our country.	The working members of society.	Our obligations to other nations.	The united world.

CURRENT LITERATURE IN THE STUDY OF THE INTERNATIONAL PEACE MOVEMENT.

Literature may be obtained from the associations given below:

World Peace Foundation, 29A Beacon Street, Boston, Mass.

American Association for International Conciliation, Substation 84, New York City.

American Peace Society, 313-314 Colorado Building, Washington, D. C.

Maryland Peace Society, 1925 Park Avenue, Baltimore, Md.

American School Peace League, 405 Marlborough Street, Boston, Mass.

TUBAL CAIN.

Old Tubal Cain was a man of might,
 In the days when earth was young;
 By the fierce red light of his furnace bright,
 The strokes of his hammer rung;
 And he lifted high his brawny hand
 On the iron glowing clear,
 Till the sparks rushed out in scarlet showers,
 As he fashioned the sword and spear.
 And he sang—"Hurrah for my handiwork!
 Hurrah for the spear and sword!
 Hurrah for the hand that shall wield them well,
 For he shall be king and lord!"

To Tubal Cain came many a one,
 As he wrought by his roaring fire,
 And each one prayed for a strong steel blade,
 As the crown of his desire;
 And he made them weapons sharp and strong,
 Till they shouted loud for glee;
 And they gave him gifts of pearls and gold,
 And spoils of the forest free.
 And they sang—"Hurrah for Tubal Cain,
 Who hath given us strength anew!
 Hurrah for the smith, hurrah for the fire,
 And hurrah for the metal true!"

But a sudden change came o'er his heart,
 Ere the setting of the sun;
 And Tubal Cain was filled with pain
 For the evil he had done;
 He saw that men, with rage and hate,
 Made war upon their kind,
 That the land was red with the blood they shed,
 In their lust for carnage blind.
 And he said, "Alas! that I ever made,
 Or that skill of mine should plan,
 The spear and the sword for men whose joy
 Is to slay their fellow-man!"

And for many a day old Tubal Cain
 Sat brooding o'er his woe;
 And his hand forebore to smite the ore,
 And his furnace smoldered low.
 But he rose at last with a cheerful face,
 And a bright courageous eye,
 And bared his strong right arm for work;
 While the quick flames mounted high.
 And he sang—"Hurrah for my handiwork!"
 And the red sparks lit the air;
 "Not alone for the blade was the bright steel made,"
 And he fashioned the first plowshare.

And men, taught wisdom from the past,
 In friendship joined their hands;
 Hung the sword in the hall, the spear on the wall,
 And plowed the willing lands:
 And sang—"Hurrah for Tubal Cain!
 Our staunch good friend is he;
 And for the plowshare and the plow,
 To him our praise shall be."

—CHARLES MACKAY.

A VISION OF THE FUTURE.

For I dapt into the future, far as human eye could see,
 Saw the vision of the world, and all the wonder that would be;
 Saw the heavens fill with commerce, argosies of magic sails,
 Pilots of purple twilight, dropping down their costly bales;
 Heard the heavens fill with shouting, and there rained a ghastly dew
 From the nation's airy navies grappling in the central blue;
 Far along the world-wide whisper of the south wind rushing warm,
 With the standards of the peoples plunging thro' the thunder-storm;
 Till the war-drum throb'd no longer, and the battle-flags were furl'd
 In the Parliament of man, the Federation of the world.
 There the common sense of most shall hold a fretful realm in awe,
 And the kindly earth shall slumber, lapt in universal law.

—Locksley Hall, ALFRED TENNYSON.

THE ARSENAL AT SPRINGFIELD.

This is the Arsenal. From floor to ceiling,
 Like a huge organ, rise the burnished arms;
 But from their silent pipes no anthem pealing
 Startles the village with strange alarms.
 Ah! what a sound will rise, how wild and dreary,
 When the death-angel touches those swift keys;
 What loud lament and dismal Miserere
 Will mingle with their awful symphonies.

I hear even now the infinite fierce chorus,
 The cries of agony, the endless groan,
 Which, through the ages that have gone before us,
 In long reverberations reach our own.

* * * * *
 Is it, O man, with such discordant noises,
 With such accursed instruments as these,
 Thou drownest Nature's sweet and kindly voices,
 And jarrest the celestial harmonies?

Were half the power that fills the world with terror,
 Were half the wealth bestowed on camps and courts,
 Given to redeem the human mind from error,
 There were no need of arsenals or forts.

The warrior's name would be a name abhorred!
 And every nation that should lift again
 Its hand against a brother, on its forehead
 Would wear forevermore the curse of Cain!

Down the dark future, through long generations,
 The echoing sounds grow fainter and then cease;
 And like a bell, with solemn, sweet vibrations,
 I hear once more the voice of Christ say, "Peace!"

Peace! and no longer from its brazen portals
 The blast of War's great organ shakes the skies!
 But beautiful as songs of the immortals,
 The holy melodies of love arise.

—HENRY W. LONGFELLOW.

Put off, put off your mail, ye kings, and beat your brands to dust,
 A surer grasp your hands must know, your hearts a better trust;
 Nay, bend aback the lance's point, and break the helmet bar,
 A noise is in the morning's winds, but not the noise of war.
 Among the grassy mountain paths the glittering troops increase—
 They come! They come!—how fair their feet!—they come that publish peace!
 Yea, Victory! fair Victory! our enemies', and ours,
 And all the clouds are clasped in light, and all the earth with flowers.
 Ah! still depressed and dim with dew, but yet a little while,
 And radiant with the deathless rose the wilderness shall smile,
 And every tender living thing shall feed by streams of rest,
 Nor lamb from the fold be lost, nor nursling from the nest.

—JOHN RUSKIN.

A HYMN OF PEACE.

(May be sung to the music of Kellar's American Hymn. It was sung to this music at the "Jubilee," June 15, 1869.)

Angel of Peace, thou hast wandered too long;
 Spread thy white wings to the sunshine of love!
 Come while our voices are blended in song,
 Fly to our ark like the storm-beaten dove!
 Fly to our ark on the wings of the dove,
 Speed o'er the far-sounding billows of song,
 Crowned with olive-leaf garland of love,
 Angel of Peace, thou has waited too long!

Joyous we meet on this altar of thine,
 Mingling the gifts we have gathered for thee,
 Sweet with the odors of myrtle and pine,
 Breeze of the prairie and breath of the sea;
 Meadow and mountain and forest and sea—
 Sweet is the fragrance of myrtle and pine,
 Sweeter the incense we offer to thee,
 Brothers, once more this altar of thine!

Angels of Bethlehem, answer the strain!
 Hark! a new birth-song is filling the sky!
 Loud as the storm-wind that tumbles the main
 Bid the full breadth of the organ reply;
 Let the loud tempest of voices reply
 Roll its long surge like the earth-shaking main,
 Swell the vast song till it mounts to the sky!
 Angels of Bethlehem, echo the strain!

—OLIVER WENDELL HOLMES.

HEROES IN TIMES OF PEACE.

'Twas said: "When roar of drum and battle's roar
 Shall cease upon the earth, O, then no more
 The deed, the race of heroes in the land."
 But scarce that word was breathed when one small hand
 Lifted victorious o'er a giant wrong
 That had its victims crushed through ages long;
 Some woman set her pale and quivering face,
 Firm as a rock, against a man's disgrace;
 A little child suffered in silence lest
 His savage pain should wound a mother's breast;
 Some quiet scholar flung his gauntlet down
 And risked, in Truth's great name, the synod's frown;
 A civic hero, in the calm realm of laws
 Did that which suddenly drew a world's applause;
 And one to the pest his lithe young body gave
 That he a thousand thousand lives might save.

—Selected.

THE BETTER WAY.

Who serves his country best?
 Not he who, for a brief and stormy space,
 Leads forth her armies to the fierce affray.
 Short is the time of turmoil and unrest,
 Long years of peace succeed it and replace:
 There is a better way.

Who serves his country best?
 Not he who guides her senates in debate,
 And makes the laws which are her prop and stay;
 Not he who wears the poet's purple vest
 And sings her songs of love and grief and fate:
 There is a better way.

He serves his country best
 Who joins the tide that lifts her nobly on,
 For speech has myriad tongues for every day
 And song but one; and law within the breast
 Is stronger than the graven law on stone:
 This is a better way.

He serves his country best
 Who lives pure life, and doeth righteous deed,
 And walks straight paths—however others stray—
 And leaves his sons as uttermost bequest
 A stainless record which all men may read:
 This is the better way.

No drop but serves the slowly lifting tide,
 No dew but has an errand to some flower,
 No smallest star but sheds some helpful ray,
 And man by man, each giving to all the rest,
 Makes the firm bulwark of the country's power:
 There is no better way.

—SUSAN COOLIDGE.

When earth as on some evil dreams,
 Looks back upon her wars,
 And the white light of Christ outstreams,
 From the red disk of Mars,
 His fame who led the stormy van
 Of battle well may cease,
 But never that which crowns the man
 Whose victory is peace.

—JOHN GREENLEAF WHITTIER.

THE FATHERLAND.

Where is the true man's fatherland?
 Is it where he by chance is born?
 Doth not the yearning spirit scorn
 In such scant borders to be spanned?
 Oh yes! his fatherland must be
 As the blue heaven wide and free!

Is it alone where freedom is,
 Where God is God and man is man?
 Doth he not claim a broader span
 For the soul's love of home than this?
 Oh yes! his fatherland must be
 As the blue heaven wide and free!

Where'er a human heart doth wear
 Joy's myrtle-wreath or sorrow's gyves,
 Where'er a human spirit strives
 After a life more true and fair,
 There is the true man's birthplace grand,
 His is a world-wide fatherland!

Where'er a single slave doth pine,
 Where'er one man may help another—
 Thank God for such a birthright, brother—
 That spot of earth is thine and mine!
 There is the true man's birthplace grand,
 His is a world-wide fatherland!

—JAMES RUSSELL LOWELL.

RING OUT THE OLD, RING IN THE NEW.

Ring out the old, ring in the new,
 Ring, happy bells, across the snow;
 The year is going, let him go;
 Ring out the false, ring in the true.

Ring out the want, the care, the sin,
 The faithless coldness of the times;
 Ring out, ring out my mournful rhymes,
 But ring the fuller minstrel in.

Ring out false pride in place and blood,
 The civic slander and the spite;
 Ring in the love of truth and right,
 Ring in the common love of good.

Ring out a slowly-dying cause,
 And ancient forms of party strife;
 Ring in the nobler modes of life,
 With sweeter manners, purer laws.

Ring out old shapes of foul disease;
 Ring out the narrowing lust of gold;
 Ring out the thousand wars of old,
 Ring in the thousand years of peace.

Ring in the vallant man and free,
The larger heart, the kindlier hand;
Ring out the darkness of the land,
Ring in the Christ that is to be.

—ALFRED TENNYSON.

THE CHERRY FESTIVAL AT NAUMBURG.

(A ballad founded on fact.)

Hard by the walls of Naumburg town,
Four hundred years ago,
Procopius his soldiers led
To fight their Saxon foe.
The blue sky bent above the earth
In benediction mute;
The tranquill fields reposed content
In blossom, grain, and fruit.

But vain the benedicite
Of tender, brooding sky;
And vainly peaceful, smiling fields
Gave eloquent reply.
Unsoothed, unmoved, in nature's calm,
The Hussite army lay,
A deadly, threatening human storm,
With Naumburg in its way.

To swift destruction now seemed doomed
The dear old Saxon town;
Before Procopius the Great
The strongest walls went down.
But soon upon the soft, calm air,
Came sound of tramping feet;
The Hussites quickly flew to arms,
Their hated foe to meet.

Ready they stood to face the charge;
The great gate opened wide,
And out there poured, not armed men,
But, marching side by side,
The little children of the town,
Whose bright eyes met their gaze
With innocence and courage all
Unversed in war's dread ways.

The men threw all their weapons down
At sight so strange and fair;
They took the children in their arms,
They stroked their flaxen hair,
They kissed their cheeks and sweet red lips,
They told how back at home
They'd left such little ones as these,
And then they bade them come.

PEACE DAY.

To cherry orchards close at hand,
 And there they stripped the trees
 Of branches rich with clustered fruit;
 Their little arms with these
 They filled, and with kind words of peace
 They sent them back to town.
 The soldiers then all marched away,
 Nor thought of war's renown.

 And now each year at cherry time,
 In Naumburg you may see
 The little children celebrate
 This strange, sweet victory.
 Once more the sound of tramping feet
 Is heard as, side by side,
 They march throughout the quaint old town,
 In childhood's joyous pride.

 Once more they bear within their arms
 Green branches, thro' whose leaves
 Ripe cherries gleam, that tell a tale
 More strange than fancy weaves,
 About a bloodless battle fought
 Four centuries ago,
 When children saved old Naumburg town
 By conquering its foe.

RECESSIONAL.

God of our fathers, known of old—
 Lord of our far-flung battle line—
 Beneath whose awful Hand we hold
 Dominion over palm and pine—
 Lord God of Hosts, be with us yet
 Lest we forget—lest we forget!

 The tumult and the shouting dies—
 The Captains and the Kings depart—
 Still stands Thine ancient Sacrifice,
 An humble and a contrite heart.
 Lord God of Hosts, be with us yet,
 Lest we forget—lest we forget!

 Far-called our navies melt away—
 On dune and headland sinks the fire—
 Lo, all our pomp of yesterday
 Is one with Nineveh and Tyre!
 Judge of the Nations, spare us yet,
 Lest we forget—lest we forget!

 If, drunk with sight of power, we loose
 Wild tongues that have not Thee in awe—
 Such boasting as the Gentiles use,
 Or lesser breeds without the law—
 Lord God of Hosts, be with us yet,
 Lest we forget—lest we forget!

For heathen heart that puts her trust
 In reeking tube and iron shard—
 All valiant dust that builds on dust,
 And guarding calls not Thee to guard—
 For frantic boasts and foolish word,
 Thy mercy on Thy people, Lord.

—RUDYARD KIPLING.

THESE THINGS SHALL BE.

These things shall be! A loftier race
 Than e'er the world hath known shall rise,
 With flame of freedom in their souls
 And light of knowledge in their eyes.
 They shall be gentle, brave, and strong,
 Not to spill human blood, but dare
 All that may plant man's lordship firm
 On earth and fire and sea and air.
 Nation with nation, land with land,
 Unarmed shall live as comrades free;
 In every human heart and brain shall throb
 The pulse of one fraternity.
 New arts shall bloom, of loftier mould,
 And mightier music thrill the skies;
 And every life shall be a song,
 When all the earth is paradise.
 There shall be no more sin nor shame,
 And wrath and wrong shall fettered lie;
 For man shall be at one with God
 In bonds of firm necessity.

OH, BEAUTIFUL, MY COUNTRY.

(Tune: Webb.)

Oh, Beautiful, my country,
 Be thine a nobler care
 Than all the wealth of commerce,
 Thy harvests waving fair;
 Be it thy pride to lift up
 The manhood of the poor;
 Be thou to the oppressed
 Fair Freedom's open door!
 For thee our fathers suffered;
 For thee they toiled and prayed;
 Upon thy holy altar
 Their willing lives they laid.
 Thou hast no common birthright;
 Grand memories on thee shine;
 The blood of pilgrim nations
 Commingled flows in thine.

Oh, Beautiful, our country,
 Round thee in love we draw;
 Thine is the grace of freedom,
 The majesty of law.
 Be righteousness thy scepter,
 Justice thy diadem;
 And in thy shining forehead
 Be peace the crowning gem.

HEAR, O YE NATIONS.

(Written for the Second National Peace Congress.)

(Tune: Lyons.)

Hear, hear, O ye Nations, and hearing obey
 The cry from the past and the call of to-day!
 Earth wearies and wastes with her fresh life outpoured,
 With glut of the cannon, and spoil of the sword.

A new era opens, transcending the old,
 It calls for new leaders, for new ranks unrolled;
 For war's grim tradition it maketh appeal,
 To service of man in the world's commonweal.

The workers afield, in the mill and the mart,
 In commerce, in council, in science and art,
 Shall bring of their gifts and together create,
 The manifold life of the firm-built State.

And more shall the triumph of right over wrong,
 Be shield to the weak and a curb to the strong.
 When counsel prevails and, the battle flags furled,
 The High Court of Nations gives law to the world.

And Thou, O my Country, from many made one,
 Last-born of the nations, at morning Thy sun,
 Arise to the place Thou art given to fill,
 And lead the world-triumph of peace and good will.

—FREDERICK L. HOSMER.

NATIONAL HYMN.

God of our fathers, whose almighty hand
 Leads forth in beauty all the starry band
 Of shining worlds in splendor through the skies,
 Our grateful songs before Thy throne arise.

Thy love divine hath led us in the past,
 In this free land by Thee our lot is cast;
 Be Thou our ruler, guardian, guide, and stay,
 Thy word our law, Thy paths our chosen way.

From war's alarms, from deadly pestilence,
 Be Thy strong arm our ever-sure defence;
 Thy true religion in our hearts increased,
 Thy bounteous goodness nourish us in peace.

Refresh Thy people on their toilsome way,
Lead us from night to never-ending day;
Fill all our lives with love and grace divine,
And glory, laud, and praise be ever Thine.

Amen.

QUOTATIONS.

There are two ways of ending a dispute—discussion and force; the latter manner is simply that of the brute beasts; the former is proper to beings gifted with reason. —CICERO.

If there is in the affairs of mortal men any one thing which it is proper to explode, and incumbent upon every man by every lawful means to avoid, to deprecate, to oppose, that one thing is, doubtless, war. —ERASMUS.

Our country is not the only thing to which we owe our allegiance. It is also owed to justice and to humanity. Patriotism consists not in waving a flag, but in striving that our country shall be righteous as well as strong.

—JAMES BRYCE.

New occasions teach new duties; time makes ancient good uncouth;
They must upward still, and onward, who would keep abreast with Truth;
Lo, before us gleam her camp fires! we ourselves must pilgrims be,
Launch our Mayflower, and steer boldly through the desperate winter sea,
Nor attempt the Future's portal with the Past's blood-rusted key.

—JAMES RUSSELL LOWELL.

Let us thank God that we live in an age when something has influence besides the bayonet. —DANIEL WEBSTER.

The more you reduce the burdens of the people in times of peace, the greater will be your strength when the hour of peril comes. —BENJAMIN DISRAELI.

The era of true peace on earth will not come so long as a tremendous percentage of your taxes goes to educate men in the trades of slaughter.

—REGINALD WRIGHT KAUFMAN.

The more I study the world the more am I convinced of the inability of force to create anything durable. —NAPOLEON, at St. Helena.

War will eliminate itself. By the next centennial, arbitration will rule the world. —General SHERIDAN, in 1876.

If the press of the world would adopt and persist in the high resolve that war should be no more, the clangor of arms would cease. —JOHN HAY.

My first wish is to see the whole world at peace and the inhabitants of it as one band of brothers, striving which should contribute most to the happiness of mankind. —GEORGE WASHINGTON.

All wars are follies, very expensive and very mischievous ones. In my opinion, there never was a good war or a bad peace. When will mankind be convinced and agree to settle their difficulties by arbitration?

—BENJAMIN FRANKLIN, in 1783.

I recoil with horror at the ferociousness of man. Will nations never devise a more rational umpire of differences than force? Are there no means of coercing injustice more gratifying to our nature than a waste of the blood of thousands and of the labor of millions of our fellow creatures?

—THOMAS JEFFERSON.

I confess without shame that I am tired and sick of the war. Its glory is all moonshine. Even success the most brilliant is over dead and mangled bodies, the anguish and lamentation of distant families appealing to me for missing sons, husbands, and fathers. It is only those who have not heard a shot nor heard the shrieks and groans of the wounded and lacerated that cry aloud for more blood, more vengeance, more desolation. —General SHERMAN.

Let the soldier be abroad if he will, he can do nothing in this age. There is another personage—a personage less imposing in the eyes of some, perhaps insignificant. The schoolmaster is abroad, and I trust to him, armed with his primer, against the soldier in full military array. —Lord BROUGHAM.

In medieval times France and England knew the horrors of a hundred years' war. The time is not far distant when they will be able to celebrate the completion of a hundred years' peace.

—Ambassador JUSSELAND, at the Lake Champlain Tercentenary.

He who by voice or pen strikes his best blow at the impostures or vices whereby our race is debased and paralyzed may close his eyes in death, consoled and cheered by the reflection that he has done what he could for the emancipation and elevation of his kind. —HORACE GREELEY.

The Hague treaty stands for the arbitration of all difficulties between nations without exception. It is not generally known how broad and important an instrument it is. I regard it as the triumph of the nineteenth century that the nations could come together at its end and make a treaty like that. The tribunal has advanced more rapidly than did the Supreme Court of the United States in the first five years of its existence. * * * In the future, instead of the barbarous cry "To arm. To arms!" we shall hear another cry: "To The Hague. To The Hague." —OSCAR S. STRAUS.

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BUREAU OF EDUCATION

BULL NO 9, 1912 PL I

THE GILMAN COUNTRY SCHOOL FOR BOYS, ROLAND PARK, BALTIMORE, MD.

UNITED STATES BUREAU OF EDUCATION
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COUNTRY SCHOOLS FOR CITY BOYS

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LETTER OF TRANSMITTAL.

DEPARTMENT OF THE INTERIOR,
BUREAU OF EDUCATION,
Washington, D. C., March 29, 1912.

SIR: In our efforts to improve our schools in America and to adapt them to the varying needs of children many thoughtful people have felt the need of giving to city schools a better environment than they usually have on our crowded streets, with scant playgrounds, if any at all. Several years ago Dr. Preston W. Search, in his book *An Ideal School*, suggested that all the schools of the city should be brought together in one or more great school parks, with ample grounds for buildings, which should be only one story high, with playgrounds and space for grass and trees. He suggested that these school parks might be located away from the centers of the cities—probably in the suburbs, where land could be had at less cost than in the business and residence sections. Other similar suggestions have been made, but for the masses of the children in the crowded sections of our cities this problem still remains unsolved.

However, what the public at large has failed to accomplish for all the children private individuals have been able to accomplish for a few of the more fortunate. The idea of the country school for city children, supported by private tuition and private means, as worked out practically at Baltimore, has extended in some degree to all parts of the country and will probably become quite common. The story of this movement, as told by Dr. William Starr Myers in the accompanying manuscript, is both interesting and suggestive and should be known to all who are working for the betterment of the material conditions of schools for city children. I therefore recommend that this manuscript be published as a bulletin of this bureau and would call especial attention to the suggestions made by Dr. Myers as to the possibility of applying this principle to the public schools. It is quite easy to see how this might be done for the public high schools, at least of most cities, with little or no additional cost to the public for buildings, grounds, and equipment, or to individual parents and children for transportation.

It has frequently happened in the history of education in this and other countries that movements for the betterment of the public schools have begun in a small way with private schools as the result of the enthusiasm and earnestness of only a few individuals. It is sincerely hoped that this movement, begun at Baltimore in a private way and already extended to a dozen cities, may become a great national movement for the betterment of the public schools, in which the great masses of children are educated.

Very respectfully,

P. P. CLAXTON,
Commissioner.

The SECRETARY OF THE INTERIOR.

COUNTRY SCHOOLS FOR CITY BOYS.

BACK TO THE COUNTRY.

“Back to the country” is the cry of the advocates of one of our sanest philanthropic movements. To free thousands of our best citizens from the unwholesome and harmful influences of crowded houses, poor light, and bad air, and to restore them to the open fields, a freedom from unnatural restraints, and the blessings of God’s sunshine, are objects worthy of the best efforts of the American people.

The average city resident of comfortable means is accustomed to think that such a movement is merely a charity designed to help the poorer and more unfortunate elements of our population, but as a matter of fact it is of vital interest to every man, woman, and child that lives in a large city. Unhealthful conditions of life do not affect merely the inmates of small houses on alleys and back streets, but spread, through inevitable contact, to the handsome establishments of the more favored neighborhoods; sooner or later the whole city is affected.

Realizing this fact, philanthropists have made an effort to find some means by which our boys who live in the city may spend at least the day in the country, and at the same time have the advantages of an education in the best schools. Some of our people of means, those who can afford the money necessary for an experiment, have hit upon a plan which has solved the problem, it is believed, and that is the plan of founding “country day schools for city boys.” And girls, too, are going to be included among those who share the benefits of this movement.

Up to 15 years ago the only two possible things for the city family, if a healthful outdoor life was desired for the children, were to live at a country home six months of the year and each day send the children in town to school, or else to break all home ties for a large part of the year by sending the boys and girls away to boarding school. A group of men and women of intelligence and enterprise in Baltimore had the vision to see and the faith to act, and the Gilman Country School for Boys, founded in 1897, is the result.

OUR PAST EDUCATIONAL EXPERIENCE.

The educational history of our country, viewed from the standpoint of this latest development, is of especial interest. In the earliest times, when our people lived in a small fringe of settlements along the Atlantic seaboard, before the public school as we at present know it was more than a mere thought in the minds of our wise colonial forefathers, the so-called Latin or Grammar schools were founded. Among the earliest of these were the Boys' Latin School (1635) and the Roxbury Latin School (1645), of Boston, and the Penn Charter School (1698), of Philadelphia. They were all what we of the present would call "private" day schools, being "public" only in the sense that any citizen might send his boys to them if he could and would pay the necessary cost of tuition.

The students spent the morning at the school, rushed home to a hasty lunch or dinner, then hurried back to the second session of the day, with the frequent accompaniment of unsatisfied appetite or harmed digestion, but they had the saving favor of broad, open streets or vacant lots to play upon after school hours were over, at 4 or 5 o'clock in the afternoon. The work done in these schools, though of a sort that to-day might be deemed narrow and old-fashioned, was sound, and to that fact we owe the foundation of most of the culture and education in America to-day.

As time went on the cities gradually built up, becoming larger and more crowded. There were fewer vacant lots for young America to play upon, and in still later days even cable and electric cars were powerless to make continually accessible the open places necessary for exercise and fresh air. So much time was taken up in going to and from the "athletic fields," which the schools must now provide, that little chance was left for the good, long, hard play that is so necessary for the proper development of a healthy boy. The gymnasium was a new advantage, it is true, but at best it merely gave opportunity for exercise indoors or in bad weather, which was more like *work* than the healthful outdoor sports and games and had the added disadvantage of making exercise a *business*.

The public schools, as we know them to-day, were later established, and from them the old-style schools and academies differed little except in size and sometimes in equipment, or in the "exclusiveness" or "selectness" that the payment of tuition was supposed to give.

Thoughtful parents were beginning to see the necessity of finding some way to keep their boys off the streets, and perhaps away from the bad associates of the hours out of school, and the only way open to them was that afforded by the boarding schools now springing up all over the country, many of them under church direction or influence. These are the institutions that are still so prominent in the educational life of the present day.

Exeter, Andover, Lawrenceville, St. James (Maryland), St. Paul's, St. Mark's, and many others were founded years ago, several of them having rounded out to-day a full century of existence. Their original purpose was mainly that of supplying an education for the boys of the small towns or country districts, for whom the day schools and academies, of which I have been speaking, were not available, and for whom the efficient high school, as we know it now, was still a thing of the future. These schools offered an opportunity that soon was grasped by the parents of the city boys, with the result that the old institutions grew at a remarkable rate, and new schools were founded all over the country. Groton, Pomfret, Hotchkiss, Hill, Asheville, Tome—all are among those dating from the period under discussion. To go away to a large boarding school of this type became the established custom.

Furthermore, the number and the popularity of our colleges and universities were increasing at the same time, and these schools were looked upon as the best means of acquiring a proper preparation for the more advanced education, with the result that they progressed in character and extent of training to a grade that has not yet been attained by the general average of other types of schools to-day.

The present status of college entrance requirements was another result. In the East our largest universities, such as Harvard, Yale, and Princeton, more often consult and adapt their entrance requirements to the wishes of these large boarding schools than to the desires of any other preparatory institutions. The reason is obvious. These schools not only supply a large percentage of the students entering college, but also by means of their excellent and thorough educational work have been a factor in raising the standard of preparation. Of course these conditions prevail to a less extent in the West, where the State universities dominate the educational field, and as heads of the public-school systems plan their requirements more nearly to meet the efforts of the high schools.

There is no question that a large boarding school offers great educational advantages to those boys whose fathers can afford to pay for them, through the excellence of its curriculum, the strength of its faculty (for it can afford to pay salaries high enough to attract some of the best teachers, who would otherwise be engaged in college work), its large and expensive equipment, and the facilities it offers for personal touch with the masters and a large and valuable acquaintance among boys from all over the country. But it has one serious drawback—it cuts off the boy from home when 12 or 15 years old, the very age of all others when he needs the influences centering around home and family, which are of greater importance than any other in the life of a normal, well-trained, healthy child. The in-

fluence of a teacher is tremendous, but at best it can only supplement and add to that of a conscientious father and tender mother. Realizing this difficulty, the country school was founded, and it bids fair to make on the educational history of our time a still greater mark than it has already made in the comparatively short time it has been in existence.

THE BALTIMORE EXPERIMENT.

The whole movement at Baltimore, Md., owes its beginning to Mrs. Francis K. Carey, wife of a prominent attorney of that city. Mrs. Carey, prompted by the wish for a proper school for her own child without separating him from the influences of home, worked out the idea of an all-day country school for city boys, perhaps combined with a boarding school, which would furnish the routine of an entire day in the country with study and sports alike under the teachers' direction. She discussed the matter with Mrs. William Cabell Bruce, and finally enlisted the interest of Dr. Daniel Coit Gilman, the lamented president of Johns Hopkins University, who together with Mr. Francis K. Carey, Mr. William Cabell Bruce, and the late Hon. William A. Fisher were so convinced of the advantages and sound common sense of the idea that they felt themselves justified in making a definite attempt to establish such a school.

In March, 1897, a committee on organization was formed, which consisted of President Gilman and Prof. Herbert B. Adams, of Johns Hopkins University; Hon. Charles J. Bonaparte, Attorney General in President Roosevelt's Cabinet; Hon. William A. Fisher, Mr. William Cabell Bruce, Mr. William H. Buckler, and Mr. Francis K. Carey. This committee issued the following announcement:

It is proposed to establish a country boarding and day school for boys, designed for the education of those boys whose parents wish them to be trained from the beginning of their school education under the best methods approved by modern educators and with surroundings which will protect their health and character. As far as possible, the school will aim to furnish to Baltimore boys the advantages which are now offered at the well-known boarding schools of the country without separating the boys, more than may be indispensable, from their parents. The school buildings will be located at some point in the suburbs of Baltimore, easily accessible by electric cars or steam railway. They will be properly equipped and furnished and will be surrounded by ample grounds.

In accordance with these plans a board of trustees was selected and a corporation formed under the title "The Country School for Boys of Baltimore City," a name that was changed recently to that of the "Gilman Country School for Boys," thus doing honor to the one of its founders who, with few possible exceptions, influenced education for good in this country more than any other American of the nineteenth century.

As the result of active effort under the leadership of Mr. Carey, in which nearly 200 men were interviewed, a fund of \$12,000 was

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"HOMewood," BALTIMORE, MD. THE FIRST "COUNTRY SCHOOL FOR BOYS."

raised with which to make the experiment. Some 27 of the most prominent citizens of Baltimore, who subscribed the amount, are known as the "founders."

At the same time was secured for the school the Homewood estate, on Charles Street extended, situated near a street car line and about 2 miles from the center of the city. It contains a beautiful old residence of the best type of colonial architecture, which was built in 1803 by Charles Carroll, of Carrollton, for his son, Charles Carroll, jr., and the school had the use of some 12 acres of grounds in addition. The estate is located on one of the rolling hills back of the city, to the north, in a situation especially beautiful, the house standing some 245 feet above the level of Baltimore Harbor. In these healthful and beautiful surroundings the school was opened on September 30, 1897, Mr. Frederic Winsor, of Massachusetts, being the first head master.

Here the school remained for 13 years, a period of steady growth in spite of several small setbacks, due to change in active management and the usual difficulties inherent in any new undertaking. On October 4, 1910, it moved into its own property, situated in Roland Park, a charming suburb, located about 2 miles farther out from the city than Homewood. Here is a new and thoroughly equipped building, which has accommodations for 60 boarders and 150 day pupils. The grounds consist of 70 acres in woodland, lawns, and athletic fields, and the large field now in use is one of the finest in the State. All water used in the school is drawn from a sealed well, driven more than 250 feet through solid rock. The yield is more than 40 gallons a minute, and is pronounced by the State board of health to be absolutely pure. The total capital invested in this new plant is more than \$300,000, of which \$225,000 has been put into the building and the grading of grounds. Mr. Frank Woodworth Pine is the present head master.

The old Homewood estate is included in the tract presented to Johns Hopkins University some 10 years ago by the late William Wyman and others and will shortly become the site of that institution.

The Gilman School now has a faculty of 15 and a student body of 157. It provides a continuous and systematic course of instruction for boys from the time they are about 10 until they are prepared to enter college. The exercises begin at 9 o'clock, and at 5.30 the day scholars return home to their parents, their minds trained by the best educational methods, their lungs filled with fresh air, and their bodies tired from healthy play.

Before giving a more detailed description of the schools and the working of the various ideals involved it is well to note the spread of the idea over the country.

GROWTH OF THE MOVEMENT.

It is a most interesting fact that, answering to the needs of the boys of New York City, another school of the same type as the Gilman School was founded in 1907, and that its founder, Mr. Frank S. Hackett, knew nothing of the Baltimore experiment.¹

This new venture, the Riverdale Country School, was the practical answer to a demand by a number of New York families for a near-by country boarding and day school. It was established at Riverdale-on-Hudson, in a beautiful site opposite the Palisades, on a ridge overlooking Van Cortlandt Park. The school property consists of 14 acres, in addition to which the boys have the range of the park for all kinds of outdoor sports. It is reached in 40 minutes by the "subway" from Forty-second Street (only 18 minutes of the time being underground), and the boys go each way in the charge of a master. The success of this school is great. It is patronized by the same class of people as the Gilman School.

In the same year as that of the founding of the Riverdale School the Country Day School for Boys of Boston was founded at Newton, Mass., under the efficient leadership of Mr. Shirley K. Kerns, at one time master of English in the Gilman School and, upon the retirement of Mr. Frederic Winsor, the acting head master for the year 1900-1901 in the same institution. The success of this school was instantaneous, and it may be looked upon as the first direct offshoot of the Baltimore plan.

In 1908 Dr. W. Wellington Massee founded the Massee Country School, at Lawrence Park, Bronxville, N. Y., on the Harlem division of the New York Central Railroad, about 15 miles from New York City. Dr. Massee writes:²

I have had a school both in New York City and in the country, and I find that the conditions are so much better in the latter place that we are able to do almost one-fifth better work. The value of the pure country air for the growing child can not be estimated. From September 26, 1911, to February 15, 1912, we have not had one of our boys under the care of a physician for even one call. In the city the attendance was very irregular, due to sickness of various kinds.

It is well to remember, too, that these boys are drawn from the wealthy class, and their supposedly pampered and sheltered upbringing is considered to be anything but favorable to good and vigorous health.

The next year (1909) saw the well-established and successful Nichols School, of Buffalo, N. Y., founded in 1893, "pull up stakes" and move to an estate of 19 acres in the suburbs of the city, easily

¹ See a valuable and interesting article by Mr. Hackett in the *New York Evening Post* (Sept. 2, 1911), entitled "New Country School Idea." I wish to acknowledge my indebtedness to the article for many ideas incorporated in this bulletin.

² Under date of Feb. 15, 1912.

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accessible by trolley, where it has erected buildings of the latest and most approved design. Under the new leadership of Mr. Joseph Dana Allen it has emerged as a full-fledged "country school." The announcement issued at the time of the change states that the school is "intended to meet all the demands of the hearty, growing boy who wishes to prepare for college under the best educational conditions and at the same time to occupy his afternoons with study and sport, doing all this among the most healthful and inspiring surroundings. 'The school that cares of a boy all day' expresses the aim of the Nichols School." That the above reasons were considered amply sufficient to explain the change of location is evidenced by the large and generous support the school has received from the people of Buffalo.

By the time another year had elapsed the influence of the idea had traveled far, and at Kansas City, Mo., was founded (1910) the "Country Day School," with Mr. Ralph Hoffman as head master. The prospectus of the school cogently stated that "the boy's afternoon, which in a large city becomes a more and more serious problem, is devoted to vigorous play. Dawdling and loafing are eliminated. The teachers join in the sports, and by their participation not only establish genuine intimacy with their pupils, but are able also to inculcate and strengthen the standards which the boys themselves are quick to recognize as those of manly sport—fairness, courage, courtesy." The school opened with 18 boys, and by the end of this, its second year, the number has more than doubled. It now occupies a temporary building, built and equipped especially for the school, in which it will remain a year or two more. It expects to have by that time a larger and more permanent plant which will make even more special provision for the outdoor side of its life, upon which it is possible to put a great deal of emphasis, owing to the favorable climate of Kansas City.

In 1911 three schools were started and a fourth one organized. The Chamberlayne School, Dr. Churchill Gibson Chamberlayne, head master, at Richmond, Va., is a second direct result of the influence of the Gilman School, at which Dr. Chamberlayne was for five years master of history. The Columbus Academy, Mr. Frank P. R. Van Syckel, head master, is the result of the efforts of a group of leading citizens of Columbus, Ohio, who asked Mr. Van Syckel to come to their city and organize it. The other two schools of this year are instances of older schools following the example of the Nichols School and adopting the new plan. They are the Minneapolis (Minn.) Country School (formerly the Blake School, founded 1907), Mr. Charles Bertram Newton, head master, and the Louisville (Ky.) Country Day School (formerly the Patterson-Davenport School, founded 1902), Mr. William Davenport, head master.

This last school only opened in January, 1912, but like the school at Minneapolis, is already assured of success.

Finally, the Jefferson School for Boys, Mr. William Tappan, head master, an excellent Baltimore day school founded some 10 years ago, has lately moved to a site in the northwestern section of the city, where it occupies a fine tract of 43 acres.

OUTSIDE INFLUENCE OF THE PLAN.

While the above sketch mentions all the schools of the new type that it has been possible to locate, yet the effects of the movement, surprising as they have been, have by no means reached their limit. A change of attitude is noticed in many of the old boarding schools located near the cities. Their faculties are impressed by the wisdom and growth of the new idea, and feeling its influence, they are welcoming day pupils from the near-by city, finding that the old fear that boarding and day pupils will not get along well together is groundless. Neither system interferes with the other, and such schools as the old Harrisburg (Pa.) Academy, or the Chestnut Hill Academy and Haverford School, near Philadelphia, are rapidly approaching the type of the "country day school," and even in many cases are welcoming the change. In fact the Harrisburg Academy has gone so far as frankly to announce its imitation of the policy of the Gilman School. It is a high tribute to the efficiency of the management of these schools that they are able to adapt themselves to the new conditions with very little difficulty and with great success.

ORGANIZATION AND OWNERSHIP.

All the schools in question are owned either by individuals or by corporations. In fact the latter is the general rule; even in case of individual ownership, there are boards of advisers or trustees. It is an encouragement for the future of education in general as well as for this kind of school in particular that these boards, usually of from 6 to 15 members, are made up of men from the best professional and commercial classes, men of culture, refinement, and capacity, who are glad to give the benefits of the ability that won for them prominence or fortune in other walks of life in order to insure the success of this experiment. More often than not they have entered their own sons as pupils of the school. Thus they add to their general interest the personal element that counts for so much toward the effectiveness of any work. It may be said in consequence of this that perhaps one reason for the great success of these schools is the fact that their management on the financial side is directed by the best business talent in the community.

Of course, the final success of any school is dependent upon the head master or principal, for it is primarily to him that the school

must look for its tone, its thoroughness, and its standard of scholarship. He appoints the faculty, with the advice and consent of the trustees. Of course, the heads of the schools under discussion are chosen men of unusual ability, training, and experience.

In many cases the idea of financial return is absent from the ownership, all profits being used to increase the scope or efficiency of the school. The stockholders, if there are any, look upon their investment as being in reality an endowment for the advancement of education.

LOCATION AND EQUIPMENT.

The schools are easily accessible from the city. They vary in distance from 2 to 15 miles and in time needful for the journey from 15 to 40 minutes. It has been found that it is difficult to draw patronage from a distance requiring more of a trip than may be made in half an hour. The Chestnut Hill Academy, in the thickly settled suburbs of Philadelphia, has found that most of its patronage comes from a radius within 15 minutes' ride of the school by train or trolley car. Several schools, notably the Riverdale and Gilman, are planning automobile service and hope by this means to solve what has been called the most difficult of all the problems—that of transportation. The success of a country school, as distinguished from other schools, depends upon securing a site that is both healthful and easy of access; otherwise the school either will be composed entirely of boarders or else will result in a dismal failure.

The grounds, which vary in extent from 3 or 4 acres to the 70 of the Gilman School, contain facilities for football, baseball, tennis, and other sports. The buildings are of the general type found best adapted to the uses of any school, due attention being given to air, light, heat, sanitation, etc. A gymnasium of fair equipment for indoor athletics is an absolute necessity, as healthful exercise is the keynote of the schools, and the weather is often too bad for outdoor sports.

It can be said from personal experience that nothing appeals to the pleasure and interest of the schoolboy quite so much as a swimming pool. This very expensive and attractive accessory is included in the equipment of a number of the schools under consideration. A pool is not a necessity, but with due care its use is very valuable, and it always proves a telling advertisement.

BOARDING OR DAY SCHOOL.

At first, most teachers of experience doubted the wisdom of ranking the boarding and day departments as of equal importance in the same school. Hence some of the schools have only day pupils, notably the Boston Country Day, the Nichols, the Kansas City, the Columbus,

the Minneapolis, the Jefferson, and the Louisville Schools. The Gilman, Riverdale, Masee, and Chamberlayne Schools include both, as do the older boarding schools of course—such as the Chestnut Hill and Haverford Schools and the Harrisburg Academy. It has been found that the fears of the doubters have been proved empty, as there are no problems involved that a firm and tactful head master can not easily solve.

In these schools the number of day scholars heavily outbalances the number of boarders. The Masee, with 40 per cent, and the Riverdale, with 35 per cent of boarders, have the largest proportional number, as compared with 28 per cent at the Chamberlayne and 25 per cent at the Gilman School. Many parents make the compromise of having their boys live at school from Monday morning till Friday or Saturday and then enjoy the benefits of home over Sunday.

A boarding department has the special advantage of being very profitable from a business standpoint. Day students are always far more expensive in comparison. No private school, however prosperous it may be or however strong its financial backing, is ever free from the problems incidental to making both ends meet and at the same time continuing to advance in scholarship and equipment.

FACULTY AND NUMBER OF STUDENTS.

On account of the location near a city, with all its advantages and attractions, especially when there is a large university, such as Johns Hopkins or Columbia or Harvard, near at hand, these schools are able to secure teachers of a high standard with less difficulty than the more isolated boarding school, located some distance away in the country. Libraries, theaters, lectures, music, the large stores—all these are advantages well worth considering, for the scholar of to-day is no longer a hermit or a mere bookworm. If so, he is not the type of man that will prove successful in the handling of boys. What is needed is the person who, no matter how great his scholarly training may be, yet has the broad, hearty interests and sympathies of the well-informed, experienced, all-round man. And this is the kind of teacher that these schools have placed on their faculties. It is interesting to note how many of the foremost universities and colleges of both America and Europe are represented in these faculties by advanced as well as by bachelor's degrees.

The faculties are large enough to guarantee small classes, so that the intimate personal touch may never be lacking. It is the need of this close personal relation between teacher and pupil, even in college education, that caused Princeton University, under the inspiring leadership of its former president, Dr. Woodrow Wilson, to introduce at great cost and effort the "preceptorial system," which has proved such a remarkable success.

The larger schools have specialists to teach each major subject. Strange to say, history and civics are the subjects so far generally neglected or inadequately provided for. The Kansas City School shows the beginning of a wholesome and welcome change in requiring history through the entire course. The general tendency, even in fine schools of this type, is to forget that training for citizenship is of prime importance and to devote an overwhelming amount of class-room energy to classics, mathematics, and other matters of college entrance requirement; a mistake, after all, no matter how necessary these subjects rightfully may be or how valuable from the standpoint of training and culture.

Most of the schools average 1 member of the faculty to every 10 pupils, a proportion allowing unusual personal attention and thoroughness of work.

The Gilman School is the largest country school, having 157 pupils. The Nichols School comes next, with 143, and the Boston Day School, with 130. It is the aim of all the schools to keep their numbers within rather moderate limits in order to insure the realization of the advantages of small classes noted above.

The ages of the boys usually vary from 8 years to 19 or 20. By taking charge of the pupils when very young a firm foundation in the elements of learning is laid, upon which later may be built the firm structure of scholarship that is needed for the more advanced work in the college or university.

In fact it is worthy of note that *thoroughness* has been taken as the ideal for all the educational work of the schools under discussion. They have no desire to be merely "hothouses" for the nurture or forcing of delicate and tender human plants, but manly and healthful places, where the boy shall "stand upon his own feet without fear or favor." The effort is made to classify boys according to their proficiency in each subject and not according to their general standing.

Several schools separate the very little boys from the older in their study and play, bringing them together each day only for the special purpose of arousing emulation and promoting school spirit and solidarity. In many cases women teachers do the work of the primary department.

TERM AND DAILY PROGRAM.

The term usually extends from the latter part of September till the second week in June, the dates being varied to fit local needs of climate, college entrance examinations, etc. It is found almost useless to attempt to continue late in the summer, as boys of the class now attending the schools belong to families that are in the habit of going away early in the season and taking their children with them.

The last few weeks of school are thus badly interfered with. In addition, the summer camps for boys by mountain or seashore start their work soon after the close of the ordinary school term. They draw a great deal of patronage from the same people.

The following is a typical daily schedule:

DAILY SCHEDULE.

9 a. m.-----	Roll call; prayers; announcements.
9.15 to 11.15 a. m.-----	Recitation and study.
11.15 to 11.30 a. m.-----	Recess, with bread and milk.
11.30 a. m. to 1.30 p. m.-----	Recitation and study.
1.30 p. m.-----	Dinner.
2.15 p. m.-----	Change to athletic clothes.
2.30 to 4 p. m.-----	Athletics.
4 to 4.30 p. m.-----	Bath and change to regular clothes.
4.30 to 5.30 p. m.-----	Study.
5.30 to 6 p. m.-----	Detention.

During the fall and spring terms the period for athletics is extended from 4 to 4.15, and each of the following periods is delayed a quarter of an hour, the study period then closing at 5.45, and the detention period at 6.15.¹

This is varied in some schools by having a recitation or study period (usually for the lighter subjects) shortly after dinner, say, from 2.15 till 3 o'clock, and all athletics afterwards. As much as possible the study in preparation of lessons for the next day is done at school, usually in small groups under the eye of a teacher, who is supposed to direct rather than assist in the work, thus inculcating responsibility and self-confidence and not giving education by the "pouring in" process. The small boys are supposed to do all their studying at school, while the amount of time used for study at home varies with the age and advancement of the pupil. In no case is the parent supposed to play the part of a substitute teacher or tutor, to aid and support the efforts of the teacher.

The midday meal is a hot lunch or dinner. The boys have plenty of time to eat this without undue haste, and with the pleasant companionship of the masters and the other boys. Thus the meals add to both health and good-fellowship.

The schools are open Saturdays for punitive or deficiency work or for the purpose of permitting the boys to spend the day in outdoor play.

ATHLETICS.

As may be expected, athletics form a prominent feature in the life of these schools, for full advantage is taken of the unusual opportunities afforded for exercise in the open air. It is interesting to

¹Adapted from the catalogue of the Chamberlayne School, Richmond, Va. The recitation periods in the various schools average 45 to 60 minutes each.

BUREAU OF EDUCATION

BULL NO 9 '19'2 PL IV

READY FOR A RACE. THE RIVERDALE COUNTRY SCHOOL, RIVERDALE-ON-HUDSON, N. Y.

note the long list that may be made from the statements in the country-school catalogues of various games and forms of exercise now in use. Twenty-five forms of exercise and amusement are actually carried on, namely, football, baseball, "soccer," outdoor and indoor basket ball, squash, bowling, outdoor and indoor handball, tennis, golf, cricket, track and field athletics, swimming, gymnastics, "setting-up exercises," cross-country running, tramping, horseback riding, skating, hockey, coasting and tobogganing, skeeing, snowshoeing, and for the little boys the games of prisoner's base, hide and seek, and snow forts. Certainly they should delight the heart of any normal American boy with good red blood in his veins.

Most of the schools have special physicians, who examine the boys, note any weakness or peculiarity of development, and prescribe the most beneficial form of exercise. All the athletics are under the close supervision of trained instructors, and many of the masters join with the boys in their play, seeing that all take part and that a good spirit of fairness and sportsmanship is cultivated.

These schools have made a healthy fight against a bad tendency common to most schools and colleges. They refuse to bend all their efforts toward producing a winning team for interscholastic matches and to permit the rest of the boys to look on from the side lines. Matches between the teams of different schools are allowed, and even encouraged, but an effort is made to keep them within moderate bounds. It is usual to require each boy to make a complete change of clothing for athletics and to follow the exercise by a shower bath or "rub down." In this way are prevented the colds that usually follow from becoming overheated and then sitting in clothing damp from perspiration.

A study period follows the afternoon sport. The boys come in to it wide awake and all aglow and make good progress toward mastering the lessons for the next day.

Five of the schools put an absolute prohibition on all smoking for boarders, and for day pupils from the time the boy leaves home in the morning until he returns home in the evening and is again entirely under the direction and control of his parents.

EXPENSES, TUITION, ETC.

As a general rule these schools are of necessity expensive, and this matter of expense may be considered to be the greatest handicap under which the movement rests. At present only the sons of people of means can enjoy its advantages. The next task for educators is to bring the benefits of these schools within the reach of a wider circle of people.

The charge for tuition ranges from \$125 to \$450 per year for day pupils, varying somewhat with the age of the boy and the location

of the school, the average being about \$250. Several schools include in this amount the cost of the midday lunch or dinner, but the larger number charge in addition \$1.50 or \$2 per week, or, perhaps, \$75 per year, for this meal.

The charge for boarding pupils is more moderate than that made by the large boarding schools of the standard type. It ranges from \$400 to \$950 per year, with an average of about \$700. Several of the schools require various "extras" for both boarding and day scholars, the most usual being a yearly charge of \$5 or \$10 for the athletic association, or of \$10 to \$15 as a fee for laboratory, manual training, drawing, or music.

SPECIAL FEATURES.

While it appears that none of the regular country schools is under church direction or supervision, yet all stress a broad-minded, sincere, religious life as the ideal for every normal man. The day opens with a religious service and Bible readings or moral and ethical instruction. Among the school patrons are Protestant and Catholic, Jew and Gentile, but all are able and willing to join in the practice of a broadly tolerant religion that is worthy of the American ideal.

It is understood when a boy enters any one of these schools that it is the right of the authorities to require his withdrawal if at any time they deem his presence undesirable.

Each school has its own characteristic features, many of them of great merit, as the following brief description will amply testify.

The Gilman School has for little boys of about 8 to 10 years an "open-air school" under the charge of a special teacher (a woman). It occupies a small, plain, wooden building, built up on three sides without windows, and the fourth side, with southern exposure, entirely open to the fresh air. Here are desks and necessary school furniture, and, wrapped up warmly, the children study and recite as in an ordinary schoolroom. So far no special difficulty has been experienced, even in the changeable climate of a Baltimore winter, and, as in the case of like experiments in public schools, the results for sick and delicate children have been most successful.

The Boston Country Day School makes a special feature of nature study, for which its situation affords great opportunity. Also great emphasis is laid upon vocal music for all students.

The Riverdale School has given successful performances, by the boys, of Shakespearean plays, notably "Julius Cæsar," "Midsummer Night's Dream," and "As You Like It." It also has frequent lectures and addresses, illustrated with stereopticon views.

The Nichols School has business courses and training in carpentry, while the Chamberlayne School has frequent excursions, under the direction of the head master, to near-by points of historic interest.

BUREAU OF EDUCATION

BULL. NO. 9, 1912 PL. V

THE COUNTRY DAY SCHOOL FOR BOYS OF BOSTON, NEWTON, MASS.

The policy of the Columbus Academy is "to avoid a multiplicity of studies at one time, but to give to those pursued earnest and thorough attention."

The Masses County School, the Minneapolis Country School, and the Louisville Country Day School make a specialty of preparing boys to enter the large boarding schools throughout the country. Other schools discourage this, attempting to keep their pupils till they are ready to enter college. All the schools heartily invite visits of parents and friends, believing that there can be no greater opportunity to show the excellence of the ideas underlying their life and work.

ADVANTAGES OF THE COUNTRY SCHOOL IDEA.

In conclusion, it should be repeated that the country schools offer the advantages of boarding schools without the necessary separation from the parents. The best influences of a home are never supplied by a boarding school; and no teacher or any other person can show the loving care and affection or "insure the softening and refining influences which a mother, of all people, can best give."¹ The right sort of a father should and does have a better influence on his son than any schoolmaster, and "if the master gets a stronger hold on the boy the father suffers in seeing his son more at ease in the companionship and preferring the society of another man to his own."² Furthermore, the boarding school boy, when at home on his vacation, might be inclined to spend his time in a round of excitement and festivities, which would tend to pervert his idea of what a home is and how it should be enjoyed.

Finally, the school that keeps a boy in the open, with plenty of fresh air and room for healthful play and away from the streets, the matinéés, and moving-picture shows, or perhaps from really harmful diversions, needs no further excuse for its being. The great problem is, how the advantages may be extended to the enormous mass of our public-school children, girls as well as boys. If school boards in country districts can consolidate schools for the purposes of efficiency and arrange for the transportation of children from widely scattered districts to a central school, why can not the method be reversed in the case of the city children? This means the arrangement of such matters as transportation, the noonday lunch, and supervision of athletics and play. It also means the formation of a public opinion necessary for inaugurating the movement and carrying it through.

It has been suggested that for the present, in the congested districts of our cities where the need of a change of conditions is more pressing,

¹ Quoted from Nichols School catalogue.

² Quoted from an address by Mr. S. K. Kerns, head master of the Boston Day School.

the tops of high office and loft buildings might be utilized. Schools for a moderate number of pupils might be organized, taking the more delicate and anemic children first. Here there would be plenty of fresh air and plenty of room to play. Small houses for families are sometimes built there. Why not small school buildings and perhaps open-air classrooms? One or more passenger elevators could be reserved for the exclusive use of the children at certain hours. The isolation of the top of the building would minimize any danger of disturbing the regular tenants. The added revenue from the rent of the roofs should prove sufficient inducement to secure the cooperation of the owners of the buildings.

These are merely suggestions. The problem is before the American people, who some day will solve it.



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PREFATORY NOTE.

The importance of agriculture and home economics as subjects of study in school and college, and the frequent inquiries which come to the Bureau of Education regarding pedagogical literature on these subjects, have led to the preparation of the present bibliography, which is intended to be a convenient and practical guide to current sources of information. The object in view is to present a selection of representative material touching all important educational aspects of agriculture and home economics. While most of the references are to recent publications, a few earlier titles, carefully chosen, have also been included, for historical purposes. Descriptive and critical annotations, either original or quoted from authoritative reviews, have been appended to many of the titles.

The bibliography was compiled and annotated in the library division of the Bureau of Education—the section on agriculture by Edward D. Greenman; the section on home economics by Miss Edith A. Wright; the whole under the direction of John D. Wolcott, acting librarian.

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64. ——— Developing the American farm boy; an address . . . before the Northern Illinois horticultural society at Harvard, December 7, 1905. [Urbana, 1905?] 26 p. 8°.

65. **Reynolds, J. H.** The relation of agricultural education to conservation. *South Atlantic quarterly*, 9: 177-88, April 1910.

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68. ——— Some text-books for secondary-school agriculture. *Nature-study review*, 3: 180-85, September 1907.
 "The article is introduced by a general discussion of the movement for agricultural education, and is followed by a detailed account and criticism of three well-known textbooks representing three distinct types."
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 An attempt to define agriculture as an art and as a science, followed by a brief discussion of the principles of pedagogical agriculture and the possibilities and limitations of the subject in different grades.
77. ——— *and Crosby, Dick J.* The American system of agricultural education . . . Washington, Government printing office, 1911. 28 p. 8°. (U. S. Department of agriculture. Office of experiment stations. Circular no. 106)
 "A brief general account of the American system of agricultural education, and includes descriptions of departments of original research and graduate study in agriculture, agricultural colleges and the various grades of instruction provided by them, secondary schools of agriculture and the work along agricultural lines in elementary schools."

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Gives a general survey of the progress of agricultural education, covering the increasing demand for education in agriculture; provision made for training teachers of agriculture for the public schools; teaching of agriculture in secondary schools; movement for securing federal aid (Davis bill); increasing scope of land-grant colleges; movements in other colleges and universities; auxiliary agencies for the advancement of agricultural education; and the status of instruction in agriculture in the common schools of certain states.

79. **United States. Office of experiment stations.** Organization, work, and publications of the agricultural education service. January 13, 1910. [Washington, Government printing office] 15 p. 8°. (Circular 93)

An annotated list of the publications of the Office of experiment stations dealing with the educational work of agricultural colleges, schools, farmers' institutes, and other forms of educational extension work in agriculture. These lists, under various titles, have been published since 1907, and give those publications available for gratuitous distribution.

80. ———— Publications of the Department of agriculture classified for the use of teachers. Issued January 27, 1912. 36 p. 8°. (Division of publications. Circular 19)

A list of publications of the Department of agriculture classified for the use of teachers and selected with special reference to their suitability to supplement college and school textbooks in the subjects mentioned. This has been issued with the desire to assist in a more intelligent use of government publications on agricultural subjects by classifying them with reference to the subjects usually taught in schools.

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82. **Wallace, Henry C.** Education for the Iowa farm boy. [Des Moines, 1910] 28 p. 8°.

A paper read before the Prairie club of Des Moines on December 17, 1910, advocating the need for agricultural education, giving an outline of the general methods of education followed in some of the foreign countries, and contrasting those methods with the methods used in this country.

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C. P. Cary, chairman of Commission.

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85. **Alabama. Association of agricultural schools. Committee on course of study.** Course of study for the agricultural schools of Alabama. *In* Alabama educational association. Proceedings, 1909. Birmingham, Ala., Dispatch printing co. p. 141-44.

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87. **Cook, George B.** The agricultural and industrial educational movement in the South. *In* Conference for education in the South. Proceedings, 1909. p. 69-84.
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92. ——— Farmers' co-operative demonstration work and its results. *In* Conference for education in the South. Proceedings, 1906. p. 113-28.
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93. ——— How can the masses be induced to adopt a better system of agriculture? *In* Conference for education in the South. Proceedings, 1910. p. 253-58.
94. ——— Improved conditions for the Southern farmer. *In* Conference for education in the South. Proceedings, 1907. p. 183-93.
95. **North Carolina. Laws, statutes, etc.** County farm life school law and explanations, by J. Y. Joyner, superintendent of public instruction of North Carolina. Raleigh, E. M. Uzzell & co., State printers, 1911. 17 p. 8°.
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"The function as regards teaching agriculture is discussed for elementary schools, high schools, the agricultural high school, normal schools and colleges and universities."
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99. **Vernon, J. J.** Agriculture—Its educational value. *Florida school exponent*, 17: 10-15, February 1910.

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101. **Bailey, Liberty Hyde.** The common schools and the farm youth. *Century magazine*, 74: 960-67. October 1907.
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102. **Bishop, Edward C.** Present status of agricultural education in the public schools. [Chicago] Printed at the University of Chicago press [1909] p. 976-83. 8°.
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103. **Bricker, Garland A.** Agriculture in the public schools. [New York, 1911] p. 395-403. 8°.
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 A discussion of what agriculture should be taught in the elementary schools and how it should be taught.
105. ——— Some pedagogical problems involved in the teaching of elementary agriculture. *Ohio educational monthly*, 60: 598-601, November 1911.
106. **Bunger, Charles S.** Agriculture in elementary schools. *Nature-study review*, 5: 189-92, October 1909.
107. **Carter, Joseph.** The practical value of teaching agriculture in the public schools. *Kindergarten magazine*, 15: 31-37, September 1902.
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108. **Conference on agricultural science, Amherst, Mass.** Public school agriculture, 1909; report of committee appointed at the Conference on agricultural science at Amherst, Mass., 1908. [Amherst, Mass., 1909] 32 p. 8°.
 "Books for study and reference": p. 32.
109. **Crosby, Dick J.** A few good books and bulletins on nature study, school gardening, and elementary agriculture for common schools. [Washington, Government printing office, 1905] 4 p. 8°. (U. S. Department of agriculture. Office of experiment stations. Circular no. 52)
 "An abridged list of books suitable for teachers beginning nature study work, for teachers' and pupils' supplementary reading, for instruction in elementary agriculture, and for reference purposes."
110. **Elliff, Joseph Doliver.** A unit in agriculture; suggestions concerning the course of study, methods of teaching, equipment of laboratories and libraries, for teaching agriculture in the accredited schools . . . [Columbia, Mo.] The University of Missouri, 1910. 65 p. 8°.
111. **Ellis, A. Caswell.** The teaching of agriculture in the public schools. Austin, Tex., The University of Texas, 1906. 56 p. 8°. (Bulletin of the University of Texas. No. 85)
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118. **Macfeat, Minnie.** Elementary agriculture and school gardening at Winthrop. Rock Hill, S. C., The Record press, 1910. 40 p. 8°. (Winthrop normal and industrial college of South Carolina. Bulletin, v. 3, no. 4, April 1910)
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 "This manual is prepared as a guide to teachers and superintendents in the introduction of work in agriculture in elementary schools. Full directions are given for conducting fourteen projects in farming."
120. **National education association. Department of rural and agricultural education.** Committee on courses of study in agriculture. Report. *In* National education association. Journal of proceedings and addresses, 1911. p. 1138-52.
 "This report is concerned only with the courses in agriculture offered in the courses of study in the general public schools and is more a representation of some of the governing influences in the arrangement of study in agriculture than of specific courses of study. Discusses the place of agriculture in the elementary schools, in the one-teacher rural school, and in secondary schools, giving topical outlines and representative courses for these schools."
121. **New York (State) Education department.** The course in nature-study, and agriculture for elementary schools, 1909-10. [Albany, N. Y., 1909] 4 p. 8°.
122. **Parks, M. M.** Agriculture in the public schools. *In* Georgia. Department of education. Annual report, 1904. p. 153-67.
123. **Roy, V. L.** Progress in agricultural education in the public schools of Louisiana. Louisiana school review, 18: 356-63, April 1911.
124. **Stevens, F. L.** Agriculture in the elementary school. *In* Conference for education in the South. Proceedings, 1910. p. 219-24.
 "The author lays emphasis on the following general propositions: 1. The ordinary elementary teacher can teach as large a percentage of the teachable facts of agriculture as she can of history, geography, or English. 2. A textbook should be used as the basis, supplemented with available illustrative material. 3. Teachers of the subject should receive special instruction in summer schools and institutes. 4. The teaching of agriculture should be required by school authorities. 5. An itinerant supervisor should be employed to assist the efforts of the local teacher."

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- Shows the need of agriculture in the public schools as a means of improving agriculture, home life, and the schools.
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- "An account is given of the growth of interest in the teaching of elementary agriculture in public schools as indicated by the attitude of men of prominence, farmers' organizations, school officers and teachers, and by recent legislation. Progress in the formulation of courses in elementary agriculture, the preparation of textbooks and manuals, the development of training courses for teachers, the organization of agricultural schools, and the number of pupils studying agriculture, is reviewed and some suggestions are made concerning ways in which the farmer may help the schools."

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- "The writer sees no conflict between nature study and school agriculture, but doubts the advisability of substituting the latter for the former in the seventh and eighth grades."
134. **Bricker, Garland A.** Suggestive outline for one year course in secondary agriculture for rural and village high schools. Education, 32: 75-76, October, 1911.
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 "The author emphasizes the demands of the new education as a preparation for life, and points out ways in which the teaching of agriculture helps to meet these demands."
137. **Crosby, Dick J.** The most useful school in the country. *In* Pennsylvania. Department of agriculture. Annual report, 1909. p. 257-63.
 "Two small country schools are described in considerable detail as illustrating the possibilities of a rural school: one at Calvert Center, Md., and the other at Waterford, Pa."
138. ——— The relation of nature study and agriculture in elementary rural schools. *Nature-study review*, 5 : 93-98, April 1909.
139. ——— The use of illustrative material in teaching agriculture in rural schools. *In* U. S. Department of agriculture. Yearbook, 1905. p. 257-74.
 "In this article the author discusses the value of agriculture in rural schools, describes methods employed in teaching this subject in a consolidated school in Tennessee, in a village high school in Pennsylvania, and in a county high school in Kansas, describes eight exercises which can be performed with simple and inexpensive apparatus, and discusses agriculture as an aid to other school work."
140. **Davis, Benjamin M.** What constitutes successful work in agriculture in rural schools? *In* National education association. Journal of proceedings and addresses, 1908. p. 1188-94.
 "This discussion is based on a study of replies to a questionnaire addressed to teachers and others interested in agricultural education."
141. **Foght, Harold Waldstein.** The American rural school; its characteristics, its future, and its problems. New York, The Macmillan company, 1910. 361 p. 12°.
 Contains: Nature study and school grounds, p. 154-78. School gardens, p. 179-204. Elementary agriculture and industrial clubs, p. 205-35.
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142. **Harvey, Lorenzo D.** Instruction in agriculture and domestic science in rural communities in Wisconsin. *In* Wisconsin. Department of education. Bulletin of information no. 5. Madison, Democrat printing company, 1900. p. [3]-23.
143. **Hochbaum, H. W.** Bulletin of agriculture and nature study for rural schools. [Greeley] State normal school, 1910. 44 p. 12°. (State normal school of Colorado. Bulletin. Ser. X, no. 5)
 Bibliography: p. 44.
 "This bulletin is devoted to rural school improvement and discusses . . . the aims in teaching nature study and agriculture and the training of rural school teachers."
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145. **Illinois.** Conference on the teaching of agriculture in the public schools. Committee on course of study . . . *Appointed*, 1910. Report made to the Second conference, held January 18-21, 1911, Urbana, Ill. Suggested course of study in nature-study agriculture for the one-room rural schools of Illinois. *School news*, 24: 445-52, June 1911.
146. **Ivins, Lester S.** A plea for agricultural instruction in the rural schools. *Ohio teacher*, 29: 339-42, March 1909.

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Contains: School gardens, p. 56-84. A farmers' boys' experiment club, p. 129-57. Educational excursions to the college of agriculture, p. 158-74. The country school and the farmers' institute, p. 175-200. The new agriculture and the country school, p. 201-25.

"This is one of the best contributions to rural education that has been written."

148. **Knapp, Seaman A.** Agricultural education for the rural districts. In National education association. Journal of proceedings and addresses, 1909. p. 954-59.

149. **McClintock, James E.** Exercises in elementary agriculture for Maine rural schools. Prepared for the State educational department. [n. p.] 1910. 15 p. 8°.

150. **Minnesota. University. Department of agriculture.** Exercises in agriculture and housekeeping for rural schools . . . St. Paul, Minn., McGill-Warner co. [1903?] 196 p. 12°. (Bulletin no. 1)

151. **Powell, E. P.** Agriculture in rural schools. In American association of farmers' institute workers. Proceedings, 1902. p. 109-113.

152. **True, Alfred C.** Some problems of the rural common school. In U. S. Department of agriculture. Yearbook, 1901. p. 133-54.

"Discusses some of the weaknesses of the rural common schools and ways of overcoming them, including centralization of schools, transportation of pupils, the introduction of studies more closely related to the practical business of the farm, securing teachers in sympathy with farm life, making the schools the center of intellectual life of the community, and the cooperation of the farmer and his family with teacher and pupils."

153. **Winnebago county [Ill.] schools.** [Annual reports] 1903-1910. O. J. Kern, county superintendent, Rockford, Ill.

These reports, published under various names, are practical, illustrated accounts of methods and results in the Winnebago county rural schools. They contain valuable material on agriculture, libraries, school grounds, transportation and consolidation, and industrial education.

SECONDARY SCHOOLS

154. **Agricultural education in secondary schools.** Papers read at the second annual meeting of the American association for the advancement of agricultural teaching, Columbus, Ohio, November 14, 1911. Washington, Government printing office, 1912. 53 p. 8°. (U. S. Bureau of education. Bulletin, 1912, no. 6)

CONTENTS: 1. Essentials in a state system of agricultural education [by] F. W. Howe.—2. The need for reliable scientific data regarding social and economic conditions in rural communities [by] E. C. Higbie.—3. The proper equipment of an agricultural high school [by] D. O. Barto.—4. The Smith's agricultural school and agricultural education in Massachusetts [by] R. W. Stimson.—5. The unprepared teacher of agriculture in high schools and colleges of education [by] A. V. Storm.—6. What is done to prepare teachers of secondary school agriculture [by] A. C. Monahan.—7. Recent publications of the Bureau of education on agricultural education.

"Six papers on vital questions concerning secondary school agriculture, read before the American association for the advancement of agricultural teaching at its second meeting held in November 1911 . . . They discuss in an able manner the place of agricultural education in the state system of public instruction and the need of reliable data concerning rural conditions, as well as matters relating to equipment and teachers for the agricultural high school."

155. **Anderson, Leroy.** Agriculture in the high schools. Whittier, Cal., Linotyping and printing by boys of the state school, 1909. 18 p. 8°. (University of California. College of agriculture. Agricultural experiment station. Circular no. 47, November 1909)

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Discusses the nature of agriculture and the reason for teaching it.

157. **Association of American agricultural colleges and experiment stations. Committee on methods of teaching agriculture.** Secondary courses in agriculture. [Washington, Government printing office, 1902] 10 p. 8°. (U. S. Department of agriculture. Office of experiment stations. Circular no. 49)
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158. **Babcock, Ernest B. and others.** Development of secondary school agriculture in California. [Berkeley, 1911] 53 p. 8°. (University of California. College of agriculture. Agricultural experiment stations. Circular no. 67)
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159. **Barto, D. O.** Problems in secondary school agriculture. *In* Central association of science and mathematics teachers. Proceedings, 1908. p. 16-23.
160. **Bricker, Garland A.** Shall secondary agriculture be taught as a separate science? *Education*, 30: 352-56, February 1910.
161. ——— Suggestions for organizing a high school course in agriculture . . . Columbus, Ohio state university, 1910. 16 p. illus. 8°. ([Ohio state university, Columbus. College of agriculture and domestic science] *The Agricultural college extension bulletin*. Vol. VI, Supplement 2, no. 11)
"Books and pamphlets containing laboratory and field exercises": p. 4-7.
162. ——— The teaching of agriculture in the high school . . . New York, The Macmillan company, 1911. xxv, 202 p. illus. 8°.

"Recent textbooks on general agriculture": p. 185-90.

"In the following pages Mr. Bricker has analyzed the problem of agricultural education in the secondary schools. He has formulated the aims and methods of agricultural education in the light of the principles and hypotheses that have been gleaned from experience in the field of general education."—W. C. Bagley in Pref.
163. **Buckham, Matthew H.** Agriculture in the high school; an address to the students of the winter course in the University of Vermont, January 5, 1910. [Burlington? Vt.] 1910. 7 p. 8°.
164. **Burnett, E. A.** The function of the land-grant college in promoting agricultural education in secondary schools. *In* Association of American agricultural colleges and experiment stations. Proceedings, 1909. p. 87-93. (U. S. Department of agriculture. Office of experiment stations. Bulletin no. 228)
165. **Crosby, Dick J.** Agricultural schools. *In* New York state agricultural society. Proceedings of the seventeenth annual meeting, Albany, 1910. p. 159a-169a.
"Briefly discusses the status, types and function of secondary agricultural schools in this country."
166. ——— Agriculture in high schools. *Southern educational review*, 4: 37-43, February-March 1907.
167. ——— *and* **Crocheron, B. H.** Community work in the rural high school. *In* U. S. Department of agriculture. Yearbook, 1910. p. 177-88.
168. **Davenport, Eugene.** The next step in agricultural education; or, The place of agriculture in our American system of education. Urbana, Ill. [1908] 22 p. 8°.

"This address was read first at Illinois college, Jacksonville, October 31, 1907, and after some alterations read, as here printed, at Missouri state university, Columbia, January 9, 1908."

The author summarizes his arguments in the following statement: "This then is the place of agriculture in our scheme of education—that it shall become an integral part of our educational system, to the end that all great interests shall be served equally well by a single comprehensive system of schools; and the next step is to see to it that agriculture shall attain the same important and honorable place in our high schools that it has already attained in our universities."

169. **Davis, Booth C.** The possibilities of agricultural education in the high schools. *In* New York state agricultural society. Proceedings of the seventy-first annual meeting, Albany, 1911. p. 381-86.
170. **Doster, James J.** Agriculture in public high schools. *In* Conference for education in the South. Proceedings, 1910. p. 225-33.
 "The author discusses the reasons for general rural indifference to school improvement and calls attention to the need of textbooks in physics, biology, chemistry, mathematics, bookkeeping, and history that are adapted to rural conditions and interest, and illustrates the importance of agriculture in the industrial development of the race. He suggests that country boys and girls should be encouraged to carry on a productive business in truck or fruit growing or in stock or poultry raising while studying in the rural high school. The school should be the social center of the neighborhood, and evening classes for the benefit of the women of the neighborhood in cooking, dress-cutting and dressmaking, in training to care for the sick, and in the prevention of disease, might be formed."
171. **Duncan, L. N.** Best method of introducing agriculture and allied branches into high schools. *In* Alabama educational association. Official proceedings, 1910. p. 207-14.
172. **Eldred, C. H.** Practical agriculture in the smaller high school. *Wisconsin journal of education*, 42: 160-62, June 1910.
173. **Giles, F. M.** Teaching of agriculture in the high school. *School review*, 17: 154-65, March 1909.
 "References": p. 165.
 This paper recommends the study of elementary agriculture as an introduction to high school science.
174. **Hatch, Kirk Lester.** The high school course in agriculture. Madison, The University of Wisconsin, 1911. 40 p. 12°. (Bulletin of the University of Wisconsin, no. 441. High school ser., no. 12)
 Bibliography: p. 37-40.
 Gives a suggested arrangement of work in agriculture and related sciences for each year; details of each unit of work; a syllabus of a four-year secondary course in agriculture; necessary laboratory supplies for a class of 12 with estimated cost; and a list of bulletins of the U. S. Department of agriculture recommended for school use.
175. **Hays, Willet M.** Agricultural education in high schools. *In* U. S. Bureau of education. Report of the Commissioner for the year 1903. v. 2, p. 1368-72.
176. ——— History of secondary agricultural education. *In* Society for the promotion of agricultural science. Proceedings, 1907. p. 73-83.
177. **Hunt, T. F.** Agriculture in secondary schools. *In* Pennsylvania. Department of agriculture. Annual report, 1907. p. 382-95.
 A brief review of the progress made in introducing agriculture in secondary schools.
178. ——— Agriculture in township high schools. *Pennsylvania school journal*, 56: 327-35, February 1908.
179. **Hurd, William Daniel.** Approved course in agriculture for high schools and academies in Maine . . . Waterville, Sentinel publishing company, 1909. 66 p. 8°.

Includes bibliographies.
180. **Knapp, Seaman A.** Shall agriculture be taught in the secondary schools of the United States? *Southern educational review*, 4: 53-64, February-March, 1907.
181. **Lohead, W.** Agricultural education in secondary schools. *Southern educational review*, 4: 43-53, February-March 1907.
182. **Main, Josiah.** Agriculture in the high school. *Popular science monthly*, 79: 385-95, October 1911.

183. **Main, Josiah.** Correlation of high school science and agriculture. *Education*, 30: 135-45, November 1909.
184. ——— Educational agriculture. Hays, Kan., 1910. 74 p. illus. 8°. (Western state normal school. Bulletin, vol. II, no. 3)
 "List of books suitable for a high-school agricultural library": p. 73-74.
 A discussion of high-school agriculture as the most important division of the subject of agricultural education, with the object of the proper fixing of the upper and lower limits of secondary agriculture, thereby determining the work of the elementary grades and higher institutions.
185. **Michigan. State agricultural college, Lansing.** Department of agricultural education. A course in agriculture for the high schools of Michigan. [Lansing] Michigan agricultural college, 1911. 64 p. 8°. (Bulletin no. 7, July 1911)
186. ——— Report of agriculture in the high schools of Michigan. [Lansing] Michigan agricultural college, 1911. 23 p. illus. (Bulletin no. 6, July 1911)
187. **National society for the study of education.** Eleventh yearbook [1912] Part 2. Agricultural education in secondary schools. Chicago, Illinois, The University of Chicago press [1912] 113 p. 8°.

CONTENTS: 1. The training of teachers for secondary courses in agriculture [by] A. C. Monahan, p. 9-21. 2. The vocational agricultural school [by] R. W. Stimson, p. 22-53. 3. State-aided departments of agriculture in public high schools [by] Dick J. Crosby, p. 54-65. 4. High-school agriculture without state subsidy [by] W. H. French, p. 66-74. 5. Short courses and extension work in agriculture for high schools—(a) In the South [by] H. F. Button, p. 75-82; (b) In the North [by] F. R. Crane, p. 83-90. 6. In public high schools should agriculture be taught as agriculture or as applied science (a) [by] W. R. Hart, p. 91-97; (b) [by] G. F. Warren, p. 98-101.

"This yearbook was discussed at the St. Louis meeting of the National society, February 26, 1912. The program represents an analysis of the typical experiments that are being undertaken, with some interpretation of each plan and its results. The contributors of the articles are specialists who are in intimate touch with the special phases of the work which they describe."
188. **New York (State) Education department.** Syllabus for secondary schools; agriculture . . . 1910. Albany, New York state education department, 1910. 103 p. 8°.

List of books for classroom work, p. 3-4.
189. **Owens, Clarence J.** Secondary agricultural education in Alabama. Washington, Government printing office, 1909. 30 p. illus. 8°. (U. S. Department of agriculture. Office of experiment stations. Bulletin 220)
 Gives an account of the district agricultural schools in Alabama with a description of their course of study and equipment.
190. **Robison, Clarence H.** Agricultural instruction in the public high schools of the United States . . . New York, Teachers college, Columbia university, 1911. 205 p. 8°. (Teachers college, Columbia university. Contributions to education, no. 39)
 "List of references on agricultural education": p. 191-200.
 CONTENTS: 1. Agricultural education. 2. Public high school. 3. Some typical high schools teaching agriculture. 4. Administration, equipment and methods. 5. Preparation and salaries of teachers of agriculture in the high schools. 6. Special secondary schools of agriculture. 7. Problems of agricultural instruction in secondary schools.
 "It comprises the most comprehensive study of high school instruction in agriculture that has been made in this country . . . Scattered throughout the work are 54 tables giving in condensed form the results of the author's investigations, and these with the topical index will render much valuable information available to students of education."
191. ——— The present status of agricultural education in public secondary schools of the United States. [Chicago, 1911] p. 333-44. 8°.

Reprinted from the School review, vol. xix, no. 5, May 1911.

192. **True, Alfred C.** Secondary education in agriculture in the United States. [Washington, Government printing office] 1909. 11 p. 8°. (U. S. Department of agriculture. Office of experiment stations. Circular 91)

"A brief review of the status of secondary education in agriculture in the United States, together with a discussion of the desirable relationships between secondary and collegiate education in agriculture and outlines of two-year and four-year agricultural and horticultural courses, showing the time given not only to agriculture and horticulture but also to other natural sciences, languages, history, and mathematics."

193. **Warren, George Frederick.** Agriculture for high schools. *In* Annual conference on agricultural science, Amherst, Mass. Proceedings, 1909. p. 32-43.

A discussion on the economic value of agricultural study, based on a Cornell university investigation of the increased earning power of trained farmers as compared with untrained.

194. ——— The place of agriculture in the public high schools. *In* National education association. Journal of proceedings and addresses, 1910. p. 1094-1103.

A brief discussion of how much education the farmer needs, what schools should teach agriculture, and the place and object of teaching it in the high school.

AGRICULTURAL HIGH SCHOOLS

195. **Crocheron, Bertram H.** Agricultural education through the public schools. *In* Maryland. State board of education. Forty-fifth annual report, 1910-11. Baltimore, The Sun job printing office, 1911. p. 68-93.

196. ——— Community work in the agricultural high school. *In* National society for the study of education. Tenth yearbook, 1911. Part II, p. 9-16.

"A detailed description of the community work undertaken by the Baltimore (Md.) county agricultural high school. It includes an account of the school, its organization, and work among the farmers, farmers' wives, and the young people of the community. This paper shows the great possibilities of a rural high school in its service to an entire community, children and adults as well."

197. ——— Laboratory and field work in the agricultural high school. *In* National education association. Journal of proceedings and addresses, 1910. p. 1089-93.

Discusses the difficulties of laboratory work in the agricultural high school.

198. ——— A very real country school; how it touches and teaches all the people. *World's work*, 23: 318-26, January 1912.

A popular account of the Agricultural high school of Baltimore county, Maryland.

199. **Cromwell, A. D.** Need for agricultural high schools. *School review*, 16: 198-200, March 1908.

200. **Crosby, Dick J.** The place of the agricultural high school in the system of public education. *In* National education association. Journal of proceedings and addresses, 1910. p. 1103-7.

The author discusses two things essential in a system of public education: 1. A standard graded course from kindergarten through the university; 2. Adequate provision for those who cannot pursue the whole course.

201. ——— Special agricultural high schools. *In* National education association. Journal of proceedings and addresses, 1909. p. 974-76.

202. **Georgia. University.** Report of J. S. Stewart . . . on the tentative curriculum of the district agricultural high schools . . . Adopted by the Board of trustees of the University of Georgia, January 10, 1907. [n. p., 1907] 8 p. 8°.

203. **Macnamee, Richard S.** District high schools. *Pennsylvania school journal*, 56: 487-91, May 1908.

204. The Minnesota agricultural high school . . . *In* Arkansas. Department of public instruction. Biennial report, 1907-1908. Little Rock, Arkansas, Democrat printing and lithographing co. p. 140-73.

205. **Noble, Stuart Grayson.** The Alabama system of agricultural high schools. Educational exchange, 26: 10-13, January 1911.
206. ——— The agricultural high school in Mississippi. Mississippi school journal, 15: 1-6, January 1911.
207. ——— The curriculum of the agricultural high school. Mississippi school journal, 15: 7-11, March 1911.
 "Presents the results of a detailed study of the curricula of the agricultural high schools of Alabama, Georgia, and Mississippi."
208. ——— Shall we have a secondary school of agriculture? Mississippi school journal, 15: 8-11, December 1910.
209. **Reynolds, J. H.** Agricultural high schools. In Southern educational association. Journal of proceedings and addresses, 1908. p. 515-25.

COUNTY SCHOOLS OF AGRICULTURE

210. **Cobb, C. A.** What one Southern county agricultural high school has done and is doing. In Conference for education in the South. Proceedings, 1910. p. 64-69.
 Describes the work of the county agricultural high school, Chickasaw County, Mississippi.
211. **Davis, Kary C.** County schools of agriculture in Wisconsin. In U. S. Department of agriculture. Office of experiment stations. Report, 1904. p. 677-86.
 "Describes the equipment of these schools, the character of instruction and facilities, and the attitude of the students and the public towards them."
212. **Johnson, A. A.** County schools of agriculture and domestic economy in Wisconsin. Washington, Government printing office, 1911. 24 p. 8°. (U. S. Department of agriculture. Office of experiment stations. Bulletin 242)
 "This report deals with the origin, equipment, organization, and work of these schools, and also contains statistical data concerning the students, graduates, and income."
213. **Michigan. Department of public instruction.** County schools of agriculture. In its Seventy-first annual report. Lansing, Wynkoop, Hallenbeck, Crawford co., 1908. p. 35-42. (Department of public instruction. Bulletin no. 24)
 A digest of the law establishing county high schools, with general suggestions regarding their organization, courses of study, etc.

MOVABLE SCHOOLS OF AGRICULTURE

214. Agricultural demonstration trains of the University of California. University of California chronicle, 11: 186-87, April 1909.
215. **American association of farmers' institute workers.** Report on movable schools of agriculture . . . In its Proceedings, 1908. Washington, Government printing office, 1909. p. 23-28.
216. **Ball, S. Mays.** With a prosperity train in Georgia. World's work, 16: 10445-53, July 1908.
217. **Gregory, C. V.** Farming by special train. Outlook, 97: 913-22, April 22, 1911.
218. **Hamilton, John.** Form of organization for movable schools of agriculture. Washington, Government printing office, 1908. 8 p. 8°. (U. S. Department of agriculture. Office of experiment stations. Circular 79)
 "A plan is proposed to organize movable schools of agriculture for farmers over nineteen years of age and for teachers in rural schools. A course is to extend over three or four seasons. The purpose is to equip several persons in each community so that they will be able to improve in their locality the branch of agriculture which the school represents."

219. **Snyder, A. H.** Traveling schools. *In* Conference for the study of the problems of rural life, University of Virginia, 1909. p. 48-54.
220. **Washington, Booker T.** Farmers' college on wheels. *World's work*, 13: 8352-54, December 1906.
221. **Wilson, N. O.** Railroading knowledge to the farmers: special trainloads of demonstrations and exhibits. *World's work*, 23: 100-6, November 1911.

FARMERS' INSTITUTES

222. **American association of farmers' institute workers.** Proceedings, 1896-1910. Washington, Government printing office [1897-1911] 15 v. 8°. Published by the U. S. Department of agriculture.
223. **Butterfield, Kenyon L.** A significant factor in agricultural education. *Educational review*, 21: 301-6, March 1901.
"The work of the grange and farmers' institutes."
224. **Creelman, G. C.** [Historical sketch of the American association of farmers' institute workers] *In* American association of farmers' institute workers. Proceedings, 1906. Washington, Government printing office, 1907. p. 11-15.
225. **Graham, A. B.** The farmers' institute with relation to rural public schools. *In* American association of farmers' institute workers. Proceedings, 1908. p. 46-51.
226. **Hamilton, John.** The farmers' institute as a factor in creating a desire for an agricultural education. *In* American association of farmers' institute workers. Proceedings, 1902. p. 68-73.
Discussion, p. 73-77.
227. ——— Farmers' institutes for women. Washington, Government printing office, 1909. 16 p. 8°. (U. S. Department of agriculture. Office of experiment stations. Circular 85)
"A discussion of the importance of farmers' institutes for women is followed by suggestions for organizing such work, including forms of organization for county and state associations, and data concerning the kind of instruction women's institutes should give, and the extent to which women's institute work has been developed in the different states."
228. ——— Farmers' institutes for young people. Washington, Government printing office, 1910. 40 p. 8°. (U. S. Department of agriculture. Office of experiment stations. Circular no. 99)
"Calls attention to the lack of adequate means for giving vocational training in agriculture to young people in rural districts after they leave the public school and before they enter upon their life occupation. As a partial remedy for this the author recommends the organization of boys' and girls' clubs, farmers' institutes for young people, subjects for institute study, systematic course for contest work, boys' encampments, form of organization, model constitution."
229. ——— The farmers' institutes in the United States. *In* U. S. Office of experiment stations. Annual report, 1910. p. 387-424.
The reports of the Farmers' institute specialist of the Department of agriculture are published annually. They include discussions on the progress and problems of institute work, accounts of the annual meeting of the American association of farmers' institute workers, and detailed reports of the farmers' institutes in different states.
230. ——— History of farmers' institutes in the United States. *In* U. S. Office of experiment stations. Report, 1907. p. 307-54.
"Includes a discussion of the progress and problems of the institute movement and a discussion of the agricultural education extension movement."

231. **Stevens, F. L.** The farmers' institute with relation to agricultural high schools. *In American association of farmers' institute workers. Proceedings, 1908.* p. 53-57.

Discusses the duty of the agricultural high school to the individual and its duty to the community. The author sums up his recommendations as follows: "A dominant agricultural atmosphere to ennoble and dignify agriculture, to make the pupil realize that agriculture is worth the while; a proper recognition of agriculture in our textbooks of history, geography, literature, science; a school curriculum broad enough to give culture, but special enough to bear upon the lives of the pupils and adapted to the majority, not to the minority, of the graduates; a competent teacher secured by whatever salary is necessary; a cooperation between the agricultural high school and the agricultural colleges and normal schools of the state."

AGRICULTURAL CLUBS

232. **Bishop, Edward C.** Nebraska corn book, including a brief treatment of the principal corn plants, potatoes and sugar beets, with something about domestic science, manual work, and announcements concerning the 1906 Corn contest and convention. Lincoln, For the Nebraska boys' and girls' associations, The University publishing co., 1906. 78 p. illus. 8°.

A manual prepared for the boys and girls of Nebraska taking part in the corn growing and cooking contests.

233. **Crosby, Dick J.** Boys' agricultural clubs. *In U. S. Department of agriculture. Yearbook, 1904.* p. 489-96.

"This paper includes a description of the boys' exhibit of corn at the Louisiana purchase exposition, the development of boys' clubs in Illinois and other states, and school fairs, and discusses the educational value of the work done by such organizations."

234. **Duncan, L. N.** The boys' corn clubs. *Progressive school journal, 1:6-7, May 1911.*

235. **Hamilton, John.** Agricultural fair associations and their utilization in agricultural education and improvement. Washington, Government printing office, 1910. 23 p. 8°.

"This circular gives the result of an extended study of the conditions of country fairs in the various states, and contains numerous suggestions in detail as to methods of increasing their usefulness for betterment of educational, social, and economic conditions in rural communities. An appendix contains a suggested form of organization."

236. **Howe, F. W.** Boys' and girls' agricultural clubs. *In Virginia. University. Conference for the study of the problems of rural life, 1909.* p. 43-47.

237. ——— Boys' and girls' agricultural clubs. Washington, Government printing office, 1910. 23 p. illus. 8°. (U. S. Department of agriculture. Farmers' bulletin no. 385)

"Available publications": p. 19-22.

"This reviews the work already accomplished by boys' and girls' agricultural and domestic science clubs in the United States, the assistance given by this Department, and the relation of such work to rural schools, and offers practical suggestions for the organization of such clubs and the planning of their work. There is also included a list of free publications of this Department and of various state colleges and experiment stations dealing directly or indirectly with this form of school extension work and related subjects."

238. **Kern, Olly Jasper.** "Learning by doing," for the farmer boy. Review of reviews, 28: 456-61, October 1903.

Boys' agricultural club of Winnebago county, Illinois.

239. ——— Winnebago county boys' and girls' clubs. *In his The Winnebagoes, 1903 [Rockford, Ill. 1903]* p. 39-49.

240. **Nebraska. Department of public instruction.** Agricultural and domestic science clubs. *In its Biennial report, 1905-1907.* Fremont, Nebraska, Hammond printing company. p. 420-21.

Corn contest, etc., p. 421-81.

241. **Nebraska. University. Department of farmers' institutes.** Nebraska boys' and girls' associations. Lincoln, Nebraska, 1907, 1908. (University bulletin. Series xii, no. 25; series xiii, no. 11, 14)
242. **Price, Homer C.** Agricultural clubs in rural schools. Ohio state university. Bulletin, series 7, no. 10. 1904.
- "This bulletin contains suggestions for organizing clubs in the rural schools of Ohio. These suggestions are the outgrowth of the previous year's experience of the first club formed in Ohio under the auspices of the students of the Agricultural Union."
243. **Roy, V. L.** Boys' agricultural clubs. 14 p. (Louisiana. Department of education. Circular of information, December 1909)
244. **Wisconsin. University. University extension division.** Farmers' clubs, organization, discussion, programs, loan of books and study materials. Madison, The University, 1909. 9 p. 12°. (University bulletin, no. 34)

SCHOOL GARDENS

245. **Babcock, Ernest B.** Suggestions for garden work in California schools. Berkeley. University press, 1909. 48 p. illus. 8°. (University of California. College of agriculture. Agricultural experiment station. Circular no. 46. October 1909).
- Bibliography: p. 45-48.
- "The author reviews briefly the progress of the children's garden movement, gives illustrations of successful school garden work in California, outlines a scheme successfully carried out at Chico, Cal., for the business management of school gardens through the organization of a school bank, and gives general suggestions to teachers who are beginning school garden work as to the creation of public sentiment for the work and as to details of the work in small rural or ungraded schools and in large rural or city schools."
246. ——— **and Stebbins, Cyril A.** The school garden in the course of study. Western journal of education, 16: 6-7, August 1911.
247. **Baldwin, W. A.** School gardens and their relation to other school work. [Philadelphia? 1905?] 15 p. (American civic federation. Department of children's gardens. Department pamphlet no. 2)
248. **Conference on agricultural science.** 3d, Amherst, Mass. . . . 1910. Proceedings of the third annual Conference on agricultural education. School and home gardens . . . Amherst, The College, 1910. 30 p. illus. 8°. (Massachusetts agricultural college. Department of agricultural education. Circular 10)
- "Books on school and home gardens": p. 29.
- Contains: 1. Coordination between garden work and nature work and book work, by G. L. Green.—2. How agriculture put new life into a rural school, by E. H. Nash.—3. Rural school and home gardens during the summer, by Elizabeth Hill.—4. Gardening in the schools of Springfield, by F. A. Stebbins.—5. Home gardens of the Worcester public schools, by E. R. Thayer.—6. Some suggestions for beginning garden work, by W. R. Hart.
249. **Corbett, Lee C.** The school garden. Washington, Government printing office, 1905. 40 p. illus. 8°. (U. S. Department of agriculture. Farmers' bulletin, no. 18)
250. **Crosby, Dick J.** Children's gardens, prospectus of the Department. 3d ed. [Philadelphia? 1906] 8 p. 8°. (American civic association. Department leaflet no. 1)
251. **Davis, Benjamin M.** School gardens for California schools; a manual for teachers . . . Sacramento, W. W. Shannon, superintendent state printing, 1905. 79 p. illus. 8°. (State normal school, Chico, California. Bulletin no. 1, July 1905)
- "Useful reference books and bulletins for school library": p. 50-53.
- Bibliography: p. 57-74.
- "Discusses the history of school gardens and their educational importance, the plant and its relations, plant propagation, instruction including aim and scope, practical work, correlative subjects, adaptation to school conditions, etc. The annotated bibliography of nearly three hundred titles is a summary of the literature of the subject up to 1905."

252. **Elford, Percy and Heaton, Samuel.** Practical school gardening. Oxford, Clarendon press, 1909. 224 p. 8°.

CONTENTS: 1. The garden. 2. Tools. 3. Preparation of the soil. 4. Sowing and planting. 5. Vegetable garden pests. 6. Herbs. 7. Salads. 8. How to make a hotbed. 9. Fruit culture. 10. Fruit-tree pests. 11. Flowers. 12. Insects and diseases which attack flowering and foliage plants. 13. Friends of the garden. 14. Weeds. 15. Calendar of gardening operations. 16. Nature calendar.

253. **Galloway, Beverly T.** School gardens; a report upon some cooperative work with the normal schools of Washington, with notes on school-garden methods followed in other American cities. Washington, Government printing office, 1905. 47 p. 8°. (U. S. Department of agriculture. Office of experiment stations. Bulletin 160)

254. **Gang, E.** School gardens. *In* U. S. Bureau of education. Report of the Commissioner, 1898-99. p. 1067-84.

"This is one of the best accounts, especially from the historical standpoint, published."

255. **Greene, Maria L.** Among school gardens. New York, Charities publication committee, 1910. 388 p. 8°. (Russell Sage foundation publication)

Bibliography: p. 341-75.

CONTENTS: 1. Evolution of the school gardens. 2. Different kinds of school gardens. 3. Soil fertility. 4. Cost of equipment. 5. Planning and planting the garden. 6. After planting, what? 7. Some garden weeds. 8. School garden in vacation and in term time. 9. Some last things.

256. **Hemenway, Herbert D.** How to make school gardens; a manual for teachers. New York, Doubleday, Page & company, 1903. 107 p. 12°.

School garden bibliography: p. 97-107.

257. **Hochbaum, H. W.** Successful school gardens. Colorado school journal, 27: 11-14, November 1911.

258. **Kelleher, S. C.** School and home gardening. Manila, Bureau of printing, 1910. 45 p. illus. 8°. (Philippine Islands. Bureau of education. Bulletin no. 31, 1910)

A manual for the use of teachers in the Philippines, prescribing courses for the elementary schools and giving detailed instructions for the preparation, planting, and care of the school garden.

259. **Kilpatrick, Van Evrie.** Gardening in city schools. School work, 7: 106-10, October 1908.

260. **Livermore, Henrietta J.** School gardens, report of the Fairview garden association, Yonkers, N. Y. New York city, Russell Sage foundation, Department of child hygiene, 1910. 31 p. illus. 8°.

261. **Maccaughey, Vaughn.** School gardening in Hawaii as related to agricultural education. *In* National education association. Journal of proceedings and addresses, 1911. p. 1126-31.

262. **Miller, Louise Klein.** Children's gardens for school and home; a manual of cooperative gardening . . . New York, D. Appleton & co., 1904. 235 p. illus. 12°.

263. **Parsons, Henry G.** Children's gardens for pleasure, health, and education. New York, Sturgis & Walton company, 1910. 226 p. 12°.

"Books for the teacher": p. 194-97.

Part 1. "Deals with the theoretical considerations favoring the use of gardening for the educational development of children. The author emphasizes its value in lessening poverty, sickness, and inefficiency, in teaching economy of time and labor, in training for other occupations and for civic affairs, and in developing a sense of the dignity of work . . . Part 2. Deals with the practical equipment and management of a school garden, the seeds and tools needed, the preparation of the soil, planting and subsequent work, and the functions of sunlight, air, water, and earthworms in plant growth. The final chapter presents a list of books and government publications for teachers. The distinctive character of this book lies in its pedagogic attitude throughout."

264. **Rowe, W. S.** School gardening at Greenville, Ohio. Ohio educational monthly, 57: 49-56, February 1908.
265. **Skinner, Hubert M.** A discussion of school gardens . . . at the N. E. A. meeting at San Francisco, Cal., July 1911. [Hammond, Ind.] 1911. 13 p. 8°.
266. **Stebbins, Cyril A.** Potentiality of the school garden. In National education association. Journal of proceedings and addresses, 1911. p. 1131-37.
 "Educationally the garden is a potent factor, for it not only educates but educates sanely, by taking into consideration the satisfaction of the racial body and the racial mind of the child."
267. **Weed, Clarence M. and Emerson, Philip.** The school garden book. New York, C. Scribner's sons, 1909. 320 p. 12°.
 Bibliography: p. 315.
 "This is intended as a general guide for teachers in directing school garden work and in utilizing its educational, economic, and social values in the training of children."

AGRICULTURE: TRAINING OF TEACHERS

268. **Abbey, M. J.** Normal school instruction in agriculture. Washington, Government printing office, 1909. 31 p. 8°. (U. S. Department of agriculture. Office of experiment stations. Circular no. 90)
 "In this circular a description is given of the agricultural course in the Mayville, North Dakota, state normal school, including a discussion of the place of agriculture in the normal school curriculum, methods of teaching, correlation, and other related subjects."
 "If the normal schools generally shall fail to give adequate instruction along the industrial and vocational lines now demanded by the persistent sentiment of the people, they must be content to see this line of teaching preparation pass to other agencies not originally intended for normal work." p. 31.
269. **Bailey, Liberty Hyde.** The better preparation of men for college and station work. In Association of American agricultural colleges and experiment stations. Proceedings, 1909. p. 25-32. (U. S. Department of agriculture. Office of experiment stations. Bulletin no. 228)
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"Part II deals with the planning of courses for elementary schools, Part III for secondary schools, and Part IV for higher institutions. There are very full and suggestive outlines of courses for each kind of school. The bibliography appended to each chapter is excellent, and there is also a selected bibliography as an appendix. The book lacks an index, which would seem to be inexcusable, none the less it is one of the most valuable books of the season."—*Journal of home economics*, October 1911, p. 418.

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CURRENT EDUCATIONAL TOPICS

No. I

- I. Illiteracy in the United States and in Europe
- II. Industrial Supervisors in Georgia
- III. New Phases of Education in Buffalo, N. Y.
- IV. Juvenile Labor Bureaus and Vocational Guidance in Great Britain
- V. The Educational Museum of the St. Louis Public Schools

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CURRENT EDUCATIONAL TOPICS.

I. ILLITERACY IN THE UNITED STATES AND IN EUROPE.

Illiteracy is a measure of the extent of elementary education in a nation, direct and universal in its application. For this reason special emphasis is placed upon this item in the census of the United States, which has become a model in respect to its presentation as well as in the discussion of its age and race bearings, the latter being one of fundamental importance.

The following summaries present the main results of the inquiry as set forth in the United States census of 1900 and in the returns for the census of 1910:

Population and illiteracy.

	Population.	Per cent of total popula- tion.	Population 10 years of age and over.		
			Total.	Unable to read and write.	
				Number.	Per cent.
1900.					
Native whites.....	50,595,379	74.5	41,236,662	1,913,611	4.6
Foreign-born whites.....	10,213,817	13.4	10,014,256	1,287,135	12.9
Colored.....	9,185,379	12.1	6,698,906	2,979,323	44.5
Total.....	75,994,575	100.0	57,949,824	6,180,069	10.7
1910. ¹					
Native whites.....	68,386,422	74.4	50,989,343	1,535,530	3.0
Foreign-born whites.....	13,345,206	14.5	12,944,215	1,650,519	12.8
Colored.....	10,240,638	11.1	7,646,712	2,331,559	30.5
Total.....	91,972,266	100.0	71,580,270	5,517,608	7.7

¹ Subject to revision.

COMPARATIVE VIEW.

The preliminary announcements of the returns under this head for the Thirteenth Census have already excited discussion and inquiry as to the relative standing of the United States, as indicated by this vital condition. The inquiry is enforced by reference to the enor-

mous expenditure of money and energy upon the work of public education.

The significance of illiteracy as a measure of popular enlightenment depends upon many conditions. Chief among these are the extent, racial character, and density of the population, since these conditions determine in great measure the success or failure of the endeavor to bring all the children of a nation under instruction. It follows, also, that the comparison of great nations with small nations, in this respect, carries little weight. For example, conditions in Denmark, with its compact population of two and a half million, in which illiteracy has been practically eliminated, may properly be compared with individual States of the Union, but signify little when the entire Republic, with its vast extent and population, is considered. For such comprehensive view the United States must be brought into relation with other nations great by reason of their populations and world influence. The significance of the comparison depends further upon the provision for public education. From this standpoint nations may be considered in two groups; the first group comprising nations having well-organized systems of public instruction; the second group, nations in which public instruction is not yet organized or has not yet passed the theoretic stage. Obviously the standard for the United States must be looked for in the first group.

The census of the United States, as already indicated, shows every 10 years the status of the country with respect to illiteracy, considering the population by age periods,⁹ and the discussion of its bearing upon the school provision is based upon the degree of illiteracy in the population above 10 years of age. This exact basis is not attainable, as a rule for other countries. In some instances the ratio of illiteracy is drawn from official marriage registers or from the record of army recruits, or from both these sources; in still other cases it is determined for age periods, not by exact count, but by statistical methods.

Within the limits defined, the United States belongs to the group of nations comprised in the following tables:

Density of population.

Nation.	Year.	Population.	Number per square mile.
France.....	1909	39,376,000	189.50
German Empire.....	1910	64,903,423	310.40
Great Britain.....	1910	41,098,401	462.80
United States.....	1910	91,972,266	30.09

According to the latest official information the status of the four nations here considered as regards illiteracy is as follows:

Illiteracy in certain countries.

Country.	Year.	Per cent of illiterates.	Basis of estimate.
France.....	1906	11.4	Population above 10 years of age.
German Empire.....	1905	.03	Army recruits.
Great Britain.....	1904	1.5	Marriage register.
United States.....	1910	7.7	Population above 10 years of age.

With reference to France it should be noted that the population above 10 years of age in 1906 included a large proportion of people who had never had the benefit of the compulsory school laws, since these were not enacted until 1882. In 1904 the records of army recruits in France, all of whom had been subject to the compulsory laws, showed only 3.5 per cent of illiterates.

The nations of the second group present the extremes of culture and distinction in the realms of science and literature, with high degrees of illiteracy. The following table shows their status in the latter respect, according to the latest census or official estimates, population above 10 years of age alone considered:

Nation.	Year.	Per cent of illiterates.
Austria.....	1900	26.2
Hungary ¹	1900	40.0
Italy.....	1901	48.0
Spain.....	1900	58.7
Russia.....	1897	70.0

¹ Including Croatia and Slavonia.

The lowest ratio for the group, i. e., 26.2 per cent, exceeds that for the Southern States of the Union, in which the greater part of the colored population is massed. In 1900, 23 per cent of the population above 10 years of age in those States were illiterate; for the white population, alone, the ratio was only 11 per cent. The progress of the colored people in respect to education, as indicated by the preliminary summary from the returns for 1910, makes it certain that the ratio on the total population of the South was greatly reduced during the decade 1900-1910. Undoubtedly there has also been a decrease of illiteracy in the European nations of the group here considered, and especially in Hungary and Italy. Throughout this group, however, the progress of popular education is hindered by obstacles greater than are encountered in any part of the United States.

There remain in Europe several small nations in which illiteracy has been reduced to a minimum or practically eliminated. They

may justly be compared in this respect with individual States of the Union having approximately the same population. Such comparisons, however, are merely suggestive, as they are necessarily made from different standpoints. For the European nations, in each case, the basis is the record of army recruits; for the selected States, the basis is the population above 10 years of age. Within these limits the comparison between the smaller kingdoms referred to and the States nearest them in population, census of 1900, stands as follows:

Nations.	Army re- cruits— per cent of illiter- ates.	States.	Per cent of illiter- ates in popula- tion above 10.	
			Total.	Native whites.
Denmark.....	0.2	Indiana.....	4.6	3.6
The Netherlands.....	1.4	New York.....	5.5	1.2
Sweden.....	.3	Illinois.....	4.2	2.1
Switzerland.....	.5	Massachusetts.....	5.9	.8

In the case of the foreign nations in the foregoing table, only the adult male population is represented, which possibly gives a somewhat more favorable showing than would be the case if the entire population was included, since the military system itself furnishes a motive for the elementary instruction of men which does not affect women. It should be noted, however, that in three of the foreign kingdoms elementary education has long been compulsory, and the compulsion is rigidly enforced, so that no one escapes the obligation of learning to read and write. In the Netherlands a compulsory law was not passed until 1900, but the importance attached to education has hitherto furnished parents a sufficient motive for securing the instruction of all their children; for instance, there is abundant provision of industrial and technical schools, including schools of household industry for girls, but only children who have passed examination in the elementary subjects are admitted to this order of training. Hence it may be said that the favorable view of these nations with respect to illiteracy derived from the record of army recruits is confirmed from many other sources. The condition of illiteracy in the four States selected for this comparison is presented from the same standpoints as in the previous comparisons. The lower proportion of illiterates in the native white population, as compared with the total population, emphasizes anew the fact that illiteracy in the United States is a burden imposed by the presence of large proportions of foreign born and of colored people. The decline in illiteracy for these two classes, as shown by the comparison of the census of 1900 with that of 1910, is proof of the steady progress of the Nation toward the plane of the highest as regards popular intelligence.

II. INDUSTRIAL SUPERVISORS IN GEORGIA.

The financial limitations to which county superintendents are usually subjected and the extensive territory which they must often cover render the work of rural supervision exceedingly difficult in many portions of the country. One of the most promising efforts to ameliorate the conditions is that of Mr. N. O. Nelson, of St. Louis, Mo. He is providing at his own expense for limited periods industrial supervisors as assistants to the county superintendents in a few counties in Georgia and Louisiana. The purpose, operation, and results of his efforts in this direction are thus described by Mr. Nelson:

In the summer of 1909 consent was obtained of the superintendent and school board of Putnam County, Ga., to accept an industrial teacher for the rural elementary schools of the county. The teacher came in September. She was thoroughly experienced in country teaching, familiar with cooking, sewing, and home-keeping; had managed successfully a small but first-class farm; was modest, tactful, and industrious; but owned no diploma. She was placed under the direction of the superintendent, but with the understanding that she should manage for herself, he lending such assistance as he could. The plan was to visit the schools in succession, spending some days in each district on the first round. At the beginning she was taken around and introduced by the superintendent. She became acquainted with the teacher and the pupils, talked to the girls about sewing and cooking; to the boys about shopwork, a garden, cleaning up, and improvements to the house and the grounds. She helped with the teaching, talked clubs, library, and wherever possible arranged for some domestic science. She was invited to the homes, took a hand in the kitchen, talked crops and stock to the farmer, and chickens, vegetables, and flowers to the mother. This was repeated on following visits. Soon canning clubs and school improvement clubs were organized; meetings were held; a library fund was started; socials and suppers were given to raise money and get together; a new schoolhouse was projected; longer school term considered; and more homes were visited. There was usually a cordial response; if not on the first visit, then at the next. It was not long before she was very much in demand, freely sent for, and entertained. She was not an instructor, but a visitor, adviser, and leader.

The plan proved acceptable and has needed no changes. The superintendent and board regarded it an important addition to the schools. Cooking and sewing were started in many places, additional tax was voted, the teachers were helped. Perhaps the most important was the awakening of social interest and the intercourse with the families at home. For the second year the boys' and girls' clubs were organized to make a joint exhibit at the county fair, with a liberal prize list. In one consolidated school a full shop and kitchen were

installed, money was raised by subscription for additional room, and an industrial teacher employed. Social gatherings and public meetings became common, the schoolhouse became a social center. Doing things became fashionable. For the third year the board unanimously took over the teacher and assumed the salary, which includes the very small expenses.

Before the end of the first year applications had been received from other counties. Three additional teachers, of qualifications about similar to the first, were added. One of these was placed in Putnam County, one in Oconee, one in Douglas, and the first teacher went to Greene. The same course was followed in the new counties with the same results. The superintendents were exceedingly helpful, gracious, and approving. For the third year, Morgan, Jones, and Hancock Counties were supplied, a number of applications being still on the waiting list. The original teacher was made supervisor to visit and help the others. There have been two gatherings of all the teachers and some of the superintendents to become acquainted and compare notes. No change in the plan has been suggested. There are no rules; no statistical reports are required, but there is much correspondence. The teachers are furnished free to the counties for two years, after which the county assumes the charge.

III. NEW PHASES OF EDUCATION IN BUFFALO, N. Y.

1. DOMESTIC EDUCATION IN IMMIGRANT HOMES.

From the first report and other documents of the Buffalo committee of the North American Civic League for Immigrants, it is learned that the organization has adopted a new way of teaching immigrant women how to become good housewives. The method consists of sending "domestic educators" directly into the homes of such families as are willing to receive them. There the domestic educators show the housewife how to keep her home clean, how to cook, how to vary the diet, how to get the most for her money, how to prevent sickness, how to sew, how to take care of the children; in fact, all or nearly all phases of home making are taken up and thoroughly demonstrated. The work started September 1, 1911, in charge of Mrs. A. L. Hansen, who now has a staff of 3 paid workers and 12 volunteer assistants. The territory is divided into districts, apportioned among the paid workers, who supervise the volunteers. Of the 12 who are giving their services without monetary reward, 6 are working directly with the families, 4 are teaching classes of domestic economy for girls, 2 are waiting for special classes to be formed, and Dr. Mallory, a woman, is giving special lessons in sex hygiene in some of the classes.

The importance of domestic education for immigrants is thus summarized by the Buffalo committee:

Amelioration of the home and living conditions of immigrant families is at the center of the problem of assimilation. Better homes mean better citizens. More serious than the present overcrowding, bad air, poor food, sickness, and the rest is the underlying hygienic and domestic ignorance. Hitherto no adequate steps have been taken to replace this ignorance by intelligence. To be reached effectively for this purpose these immigrants must be reached in their homes.

Regarding the practical results achieved the most recent available report by Mrs. Hansen says, in part:

It has been found that the teaching given to the mother of a family is passed along to her neighbors and relatives, especially the teaching of food principles. It very frequently happens that a woman's neighbors and relatives are in her home when the educator arrives, and they receive the benefit of the instruction. The news seems to fly along some streets that the educator is in a certain home, and women come flocking into the house to see what is going on, many of them bringing garments to be fitted or altered.

Cereals are now used in 50 homes where a month ago they were unknown. The use of coffee in all the homes the educators are visiting is on the decrease, and cocoa is used in its stead, while fresh milk has been substituted for canned milk. Stews and nourishing soups have taken the place of boiled cabbage and fried pork. Women are baking their own bread and cookies, instead of buying a most inferior quality at the nearest bakeshop. Some families who were left as hopeless by several other philanthropic agencies have been induced to clean up their homes under the educators' instructions. There are numberless children now receiving proper hygienic care who before the educators' visits were strangers to soap and water. Prospective mothers have benefited greatly by the instruction given; several babes born this month have found carefully prepared clothing awaiting them, whereas their elder brothers and sisters found only an old shirt.

Hardly a day passes that the dispensaries are not visited by several patients sent in by the educators.

Lessons in sewing have proved very attractive to a large number of women. The educators have found that after cutting and fitting one garment for a woman, she can generally manage a second very well alone. The children are going to school with buttons on their dresses, whereas before the garments were pinned; the stockings are getting attention both as to mending and washing, whereas previously there was only neglect.

Through cooperation with the Charity Organization Society 20 women are taught how to buy economically. The Charity Organization Society committee have given the grocery order, or cash, for the family into the care of the educators. It has been found that after the aid has been discontinued the women still buy as instructed. In a number of these families regular instruction by the educator can soon be discontinued altogether.

The class work has proved far-reaching. The educators have found that the girls carry home the instructions given in class, so that for every girl in class a family is reached. The classes in sewing are taught hygiene and economy as well as sewing. The cooking classes have been given instruction in preparation of cocoa, cereals, toast, and corn-meal bread. At each lesson the food principle of the food under preparation is given and the girl shown the benefit derived from using these foods.

The classes now number 10 and the total number of pupils 116. As only 3 of these children are in families visited, 113 additional families are thus affected through classes, making a total of 190 families reached.

The families dealt with are usually referred by the Charity Organization Society, social service departments of hospitals, settlements, the District Nursing Association, clergymen, and neighbors. In these families the domestic educators confine themselves to constructive educational work. Where material relief is necessary it is supplied by the Charity Organization Society. Where sickness or ailments exist the District Nursing Association, the tuberculosis bureau of the health department, dispensaries, and hospitals are called upon. Duplication is avoided. Cooperation is the watchword.

2. BUFFALO'S SCHOOLS OF CITIZENSHIP.

According to the Buffalo committee of the North American Civic League for Immigrants, two-thirds of the population of Buffalo are either foreign born or of foreign parentage. The committee claims for Buffalo the distinction of being "the first city in the United States to take the forward step of placing citizenship education on

a clearly recognized and distinct basis." The committee outlines Buffalo's immigrant problem, in the solution of which its schools of citizenship are designed to render aid, as follows:

These immigrants in the Buffalo community are at once a liability and an asset. Most of the immigrants are poor to the point of destitution when they come here. They have been accustomed to agricultural life. They have known only undemocratic government. Their traditions and their whole point of view are foreign. They are dependent on an alien tongue.

Because of their poverty they have to find the cheapest living quarters. Because they have had only agricultural experience, in the city they are fitted only for common labor and so they get only minimum wages. Minimum wages mean that they must continue to live in the poorest quarters, which in turn means overcrowding and disease. Long, grinding toll, overcrowded homes, and the lack of wholesome recreation inevitably produce a crop of saloons, and the saloons lead to drunkenness, moral degeneration, and crime. Ignorance of democratic government retards the development of intelligent citizenship. Foreign traditions and viewpoint, and dependence on an alien tongue, result in segregation in semisolated colonies. This segregation aggravates and perpetuates the other evils. Buffalo's immigrants are in the community, but not of it. For purposes of progressive citizenship they are in large degree a dead weight. In short, they are a serious civic liability.

The single fact, however, that these immigrants provide half of the community's common and semiskilled labor shows that even under present conditions they are an asset of great value. The city's industries are largely dependent upon them. Their present value as an asset is small in comparison with their potential value. They are capable of being developed into intelligent, alert citizens, who, instead of in many ways holding the community back, will contribute actively to its advance. For the community as a whole, improvement of the conditions of the city's immigrants means a gain in community coherency, strength, and effectiveness.

Independently of the economic problem involved, the civic condition of the immigrant is susceptible of improvement through education, and this angle of attack, among others, has been adopted by the Buffalo committee by the establishment of a specialized school, which it describes as follows:

Under present conditions the proportion of immigrants who become naturalized citizens is very small. The proportion of those naturalized who have an adequate understanding of the meaning and obligations of citizenship is still smaller.

The New York-New Jersey committee has for some time been working on a plan for establishing schools of citizenship to deal with this situation.

The Buffalo committee proposed to the department of public instruction last spring that it try some citizenship classes in the evening schools. The department agreed to be responsible for supervision if the committee would bear all expenses except the cost of heat and light. The experiment was made on this basis, with the cooperation of the Young Men's Christian Association, which provided part of the teachers. The classes were held in May and June. Approxi-

mately 250 Polish and Italian young men were given instruction in naturalization and citizenship, combined with English.

Though the difficulties involved in the entire newness of the undertaking were many, the experiment was regarded as on the whole so successful—thanks chiefly to the fact that Principals John J. Walsh and Charles L. Ryan were constantly at the helm—that the department decided to make citizenship instruction a permanent and regular part of the evening school system. Last fall classes of this sort were organized in the majority of public evening schools in immigrant districts.

Buffalo is the first city in the United States to take the forward step of placing citizenship education on this clearly recognized and distinct basis.

Inasmuch as this departure is closely connected with the evening school and extension work of the department of public instruction, and as this work as a whole is such a vital factor in the Americanization of the city's immigrant population, the committee has made the following recommendations, with a view to getting the largest profits from this part of Buffalo's educational machinery:

1. Perfecting the organization of the instruction in citizenship.
2. Extending the teaching of English as far as possible and raising it to the maximum of efficiency.
3. Lengthening the evening school season to the degree that the attendance warrants.
4. Making use of school buildings every week-day evening by organizing two-evening and three-evening groups of classes and holding on Saturday evenings neighborhood gatherings on the social-center plan.
5. The appointment of a director of evening, vacation, and other extension work, to give all his time to these matters.

Supt. Emerson has expressed his approval of these suggestions, and his intention of putting them into effect as soon as possible. The department's budget for the ensuing year provides for requisite appropriations.

IV. JUVENILE LABOR BUREAUS AND VOCATIONAL GUIDANCE IN GREAT BRITAIN.

In Great Britain the problem of juvenile labor has reached the same stage as in the United States, hence special interest attaches at this time to measures adopted by British authorities to conserve and direct the future working force of the nation. These measures have been excited by the alarming increase in the number of the unemployed.

Repeated investigations have proved that the idle army is constantly recruited from the ranks of the young who are not fitted for skilled labor of any kind. As regards the children of the poor and the shiftless, education and labor present, in fact, two aspects of the same problem. This relation is now clearly recognized in Great Britain, and legal measures have been taken to use this relation for the benefit of juvenile workers.

By the labor exchange act of 1909, authority was given to the board of trade to establish and maintain labor exchanges; to assist exchanges established by public bodies or by private agencies; to make general regulations for the management of labor exchanges established or assisted by the board; and also to establish and support advisory committees in connection with the management of labor exchanges. The education (choice of employment) act for England which went into effect November 28, 1910, authorized the local education authorities "to make arrangements, subject to the approval of the board of education, for giving to boys and girls under 17 years of age assistance with respect to the choice of suitable employment, by means of the collection and the communication of information and the furnishing of advice."

As a result of the two measures the board of trade was brought into direct contact with the educational authorities, which in many places had already set up a system of labor exchange in connection with the public schools. After much deliberation, a joint memorandum was issued on the part of the two central authorities, the board of education and the board of trade, determining their relations in respect to juvenile employment. The memorandum provided that the right of directing pupils, boys and girls, in regard to employment, for 6 months after the close of their school life, should be reserved to the education authorities.

This agreement not only saved the employment agencies already established by the school authorities, but recognized their preeminent fitness for organizing the vocational guidance of the young. The Scotch education act of 1909 had previously empowered local education authorities to take measures for the industrial guidance of children.

In accordance with this official action juvenile labor bureaus are being established in all the large cities of Great Britain, either directly by the education authorities or by other bodies with which the former cooperate. The general conduct of the bureaus, which varies but little in different cities, will be best understood by reference to typical examples.

THE MOVEMENT IN BIRMINGHAM.

Birmingham, a great manufacturing center, numbering more than 570,000 inhabitants, was one of the first cities to take action in respect to the vocational guidance of the young. Widespread attention was called to the subject by public meetings and by a circular letter emanating from church dignitaries, members of Parliament, labor leaders, and employers. One result of this action was the appointment of a subcommittee of the Birmingham education authorities to devise measures for assisting pupils in the choice of employment. Before the committee had completed its work, the labor exchange act was passed, and the recommendations were carried out in agreement with the board of trade. The juvenile employment bureau was organized by the education committee as part of the British Board of Trade national employment system. The bureau and its officials are under the supervision of a central committee. Local exchange centers are established to record and fill local vacancies, acting always in advice with the central committee. There is a "Central Care Committee" organized as a subcommittee of the education authority, and including six representatives of that body, four social workers, four teachers, four employers, and four trade unionists, together with the superintendent of the Birmingham Labor Exchange, and the medical inspector of schools.

The British Board of Trade meets all expenses incurred in connection with the employment bureau, the head of which is appointed by that body after consultation with the local education authorities. The work of teachers in finding situations for boys and girls is encouraged, while employers are urged to notify vacancies to the employment bureau, so that they can be filled by exchange officials.

At the time the system was adopted it was estimated that in Birmingham 8,500 children leave the schools annually, of whom 4,500 are boys; that there were in Birmingham 35,900 children less than

17 years of age who had left school, of whom 800 were less than 14, 11,500 between 14 and 15, 11,600 between 15 and 16, and 12,000 between 16 and 17. These all belonged to the laboring classes; and while the number who were in need of responsible guidance was not exactly known, experience showed that they must form a very large proportion of the total number.

EDUCATIONAL INFORMATION AND EMPLOYMENT BUREAU, EDINBURGH.

The school board of Edinburgh, like the council of Birmingham, established a system of labor exchanges in the interests of juvenile employees before there was any legislation on the subject. The work was started by the school board; employers, organized trades and crafts, religious, social, and other welfare agencies joined in its support. Their efforts at first were directed to promoting attendance at continuation schools. In 1908 the board took measures to utilize the understanding and cooperation thus brought about for the establishment of an educational information and employment bureau.

After the passage of the labor-exchange act, this bureau became a branch of the labor exchange, but housed in the school-board offices, and managed in connection with the education system of the city. All matters pertaining to the employment of persons between the ages of 14 and 17 were transferred to the juvenile department at the school-board offices. The advisory committee formed originally by the school board continues to maintain oversight of the employment, the continuation education, and the general welfare of children and youth.

This advisory council, which is an invaluable feature of the system, comprises the members of the school board (two of whom are women), a representative of the board of trade, and representatives of the town council, chamber of commerce, trade associations, local trade unions and educational trusts, and head teachers of day and continuation schools.

During the four school years (1906-7 to 1909) covered by the latest report of this work in Edinburgh, the enrollment of pupils at the continuation schools increased by 136 per cent; that is, from 3,722 (in 1905-6) to 8,789 in the last year. The school board, supported by the labor bureau and by the advisory council, has been pushing energetically in the direction of enrolling the 7,000 or more additional young people, between the ages of 14 and 17, who are receiving no instruction either in subjects of general education or in the technical principles of their daily occupations.

The report shows also steady progress in the difficult undertaking of placing young workers in suitable employment. This requires the confidence and support of employers on the one side, and on the

other a willingness to be guided on the part of the parents and the children needing the services of the bureau.

In the summer of 1909, or 14 months after the present organization was effected, 4,270 pupils were reported as leaving the ordinary day schools. Of this number 3,074 stated their intention of enrolling in continuation classes. A third of these (1,129) made application for employment, and of this number 740 were placed, through the agency of the bureau, in suitable employment. The positions included 60 different trades, also office work and miscellaneous business.

MAGNITUDE OF THE PROBLEM IN LONDON.

The problem of juvenile labor in London presents special difficulties by reason of its magnitude and racial complications. The London county council, the education authority for the "inner ring" of the metropolis, through its special committee deals with a population of 4,750,000. The entire school population, in round numbers 887,000 children, is scheduled and under the supervision of school attendance officers. Consequently the status of each child as regards school attendance and living conditions is known.

The need of juvenile labor exchanges has long been recognized in the metropolis, and several private agencies have undertaken the service within limited areas of the city. But the most successful of these, the "lads' employment committee," reaches every year only a few hundred poor boys of the better sort. It is estimated that 40,000 boys come to the school-leaving age, 14 years, annually; they represent the juvenile labor problem of the metropolis in its full magnitude and its blackest aspects.

Within the past few months the London council has developed plans for the new service on the basis laid down by the board of trade. Already 20 advisory committees, representing employers, workmen, and the education authorities have been formed to cooperate in this work with the 21 metropolitan labor exchanges pertaining to the system under the board of trade. The teachers send to the committees of their respective districts particulars concerning the children who are about to leave school. The committees, through their relation with the labor exchange, are posted as to employers and vacancies; and thus, it is hoped, the work and the young worker may be brought together.

In London, as in Boston and New York, experience has shown the need of special training for the work of vocational guidance. To meet this need the board of trade and the London council have drawn up a tentative program for professional instruction, and made provision for classes under the conduct of competent and experienced teachers.

THE GRAVER ASPECTS OF THE PROBLEM.

The graver aspects of this social problem were considered in a recent meeting of the North of England Conference, an organization that has led public action in many reform measures. The conference declared emphatically for an extension of the compulsory school period. "This is essential," said a leader of industry, "if the youth of the country is to obtain the minimum standard which a modern state requires * * * and our industrial and commercial system demands."

At present "compulsory education" in England beyond the age of 14 years is secured in a measure by the action of certain private firms which send the young people in their employment to evening classes up to the age of 18 or 19, and pay the fees. This form of "friendly compulsion" is not to be hoped for in the great centers of industry. In them, the only remedy for the evil of premature labor, with its aftermath of incapable and idle men, is legislation that shall raise the age of entry into trade or business to 16 years, with compulsory school attendance up to that age. Makeshift employments for the young would thus be ended; but every effort for such legislation is baffled by the pressure of human necessity, the need of food and shelter, which is the chief cause of the labor of children.

In London, where poverty exists in its greatest extent and complications, the public school is rapidly becoming the chief center of the movement for social and industrial reform. Its agents in this activity are the juvenile labor exchanges, the advisory committees, and the children's care committees. The last-named committees were formed originally to look after necessitous children attending the public schools. In the development of the juvenile employment system, they have been authorized to maintain friendly oversight over boys and girls securing positions through the labor exchanges, up to the age of 18 years.

Already 450 elementary schools are referring children to the labor exchanges through the medium of the advisory committees, and every week the number increases.

V. THE EDUCATIONAL MUSEUM OF THE ST. LOUIS PUBLIC SCHOOLS.

The effectiveness of many elementary school courses may be increased by the liberal use of photographs and other objective material, to the end that the child may be brought into a more nearly immediate contact with reality than can be given him by books. "Objects must always underlie books as the guarantee of knowledge which concerns the material world."—(B. R. Andrews). This is the ground upon which the school museum was introduced into the instructional scheme of the elementary schools of St. Louis.

The collection was begun as an experiment in 1905, at the close of the St. Louis World's Fair, when the board of education acquired from the exhibitors, principally by gift, large quantities of material, the educational value of which did not cease with the termination of the fair itself. Valuable additions have since been made through the courtesy of some of the great museums of the country, of the Jamestown Exposition officials, and of commercial firms, both domestic and foreign. The museum now contains about 6,700 collections of educational material, so classified as to reenforce and accord with the course of study. The subjects in the teaching of which the education museum provides especially useful aids are history, reading, art, geography, nature study, and other elementary sciences. Of the collections on hand, 1,742 are separate entries, the rest being duplicates.

In the collation and presentation of the museum material, a two-fold purpose is constantly kept in view: By showing pictures to transport the child, as it were, to the place illustrated, and by showing objects to transport the place to the child. Thus, when the class comes to a study of the cotton States the museum furnishes specimens of the cotton plant in all its various stages, together with pictures showing the manner in which it is gathered, and the products into which it is transformed. A stalk of cotton is passed around the class at the same time the child is looking upon a picture of the white-flecked field. As he handles the cotton boll he is shown pictures of the pickers at work. So the lesson proceeds, description being re-enforced by the exhibition of the object described, and this in turn

by pictures showing how the crop is raised and how manufactured. An extract from the museum's carefully annotated catalogue, issued for the guidance of teachers, shows the completeness of this teaching process. The following is quoted verbatim, including the parenthetical remarks of explanation:

MATERIAL FOR CLOTHING.

Reference Books: CHISHOLM—Commercial Geography; HANAN—Textile Fibers of Commerce; LYDE—Man and His Markets; TOOTHAKER—Commercial Raw Materials.

Collection 100: Cotton of the United States.

Fibrous portion of fruit of cotton plant. Cotton most extensively used is that cultivated in the southern part of the United States, from Virginia to Texas.

1. Cotton bolls, Louisiana.
2. Cotton, unginned, Texas.
3. Cotton, ginned, Arkansas and Mexico.
4. Cotton seeds.
5. Cottonseed linters.
6. Miniature cotton bale.

Collection 101: Cotton of other countries.

1. Sea island cotton, West Indies.
2. Peruvian or kidney cotton, Peru.
3. Silk cotton obtained from the cotton tree, Honduras and Venezuela.
4. Pods of cotton tree, Philippine Islands.

Collection 102: Cotton products.

1. Cottonseed oil. Substitute for olive oil; also used for burning in lamps, soap making, and lubricating.
2. Cotton oil cake. Used as cattle food and fertilizer.
3. Cottonseed meal. Ground cottonseed cake.
4. Cottonseed meal. Cattle food.
5. Cottonseed oil soap and soap powder.
6. Cottolene. Cooking fat obtained from cottonseed oil.
7. Varieties of paper made from cotton stalks, carded and heckled, and changed into pulp, from which paper is made.

Collection 113: Manufacture of cotton.

Glass case showing the various stages of manufacture of cotton goods.

Illustrating cotton and cotton industry collections.

104. Stereoscopic views: Cotton industry of various countries.
105. Cotton industry: Fifteen copies of one view—"Cotton pickers in the field."
106. Cotton industry: Fifteen copies of one view—"Cotton on the levee, New Orleans."

For purposes of quick review, as well as for further exposition, this series of collections could be supplemented by the following magic-lantern lesson. Again the quotation is from the museum's catalogue, including the brief descriptions:

COTTON.

1. Map of United States, showing cotton area.
2. Among the cotton negroes in field, Louisiana.
3. Topsy in the cotton, Louisiana. Little colored girl.
4. Home of a cotton picker, Mississippi. One-story cabin.
5. Bringing in the cotton. Storing it in log house, Louisiana.
6. A cotton gin. Exterior of rude house. Boiler under shed.
7. Cotton-press yard. Cotton packed in bales. New Orleans, La.
8. Cotton at railroad station. Packed in bales.
9. Cotton levee. Ready for shipment. Ocean steamer. Mississippi River. New Orleans, La.
10. Cotton factory, Fall River, Mass. Iron mills; steam power.
11. Cotton factory; cotton house, Fall River, Mass.
12. Cotton factory; rear; covered bridge connecting buildings, Fall River, Mass.
13. Cotton factory; carding room (English cards), Fall River, Mass.
14. Cotton factory; carding room, Fall River, Mass.
15. Cotton factory; spinning room, Fall River, Mass.
16. Cotton factory; weaving room, Fall River, Mass.
17. Cotton ready for sale; interior wholesale house, St. Louis, Mo.

If it were considered desirable to use the cotton industry as a point of departure for further lessons in geography, it would be readily possible to continue with lantern lessons on the Southern States; on Egypt, Japan, and other foreign countries where the cotton is raised, as well as on New England, Great Britain, and other manufacturing centers where it is turned into cloth.

The classification scheme of the museum is as follows:

Food Products: Comprising the cereals in the plant and grain and their products. Coffee, tea, sugar, cacao, the cocoanut, the various spices, nuts and fruits, waxes, oils.

Materials for Clothing: The various animal and vegetable fibers of the world and the fabrics made of them.

Other Natural Products: Foreign and domestic woods, rubber, gutta-percha, camphor, cork, coal, etc., their various stages of development and their use; materials for dyeing and tanning; medicinal plants, etc.

Industrial Products: Showing the various processes in the manufacture of industrial products, as paper, ink, pen and pencil, glass, leather, etc.

Animals: Mammals, birds, fishes, reptiles, insects, etc., mounted or in alcohol, together with pictures and charts of specimens.

Plants: Models and colored representations.

Minerals, Rocks, and Ores.

Exhibits: Views, charts, and articles illustrating life and history of other nations.

Apparatus for the Illustration of Physical Geography.

Apparatus for the Illustration of Elementary Physics.

Charts and Photographs for the Illustration of History and Architecture.

Charts Illustrating Astronomy.

Charts Illustrating Physiology.

Classified Collections of Stereoscopic Views and Lantern Slides for the illustration of geography, history, botany, zoology, art, and reading.

A few representative collections, as described in the catalogue, follow:

BIRDS.

Domestic Birds: Thrushes.

Our finest songsters. Inhabit woodlands. Migratory. Great destroyers of insects. Feed mostly on the ground.

Collections of mounted specimens.

479. Wood Thrush. Eastern United States. Winters in Central America. In maples and elms about human dwellings. Nest built in sapling near ground.

480. Hermit Thrush. Eastern North America. Winters in Middle and Southern States. Smallest of thrushes. In dense woods. One of the finest singers.

481. Varied Thrush. Western parts of North America. Food and habits much like those of robin.

482. Robin. Eastern North America to Rocky Mountains. Winters chiefly in Southern States. Best known of thrushes. Feeds on worms and fruits, particularly cherries.

483. Bluebird. United States. Winters in Southern States. Builds about our homes. Decreasing because of persecution by English sparrow.

Foreign birds: Thrushes—Collections of mounted specimens.

575. Black Thrush. (*Merula Mandrina.*) Europe and Asia. Frequents hedges, thickets, and gardens. Feeds on larvæ, snails, worms, insects, and fruits. Imitates notes of other birds.

576. Rufous-tailed Thrush. (*Merula Pallida.*) Male and female. Eastern Asia. Good singer.

577. Ground Thrush. (*Geocichla Sibirica.*) Eastern Asia. Terrestrial. Insectivorous.

578. Rock Thrush. (*Rhyacornis Fulgurosa.*) Eastern Asia. Builds nests in crevices of rocks. High mountains in summer, lower slopes in winter. Feeds on insects and fruits.

579. White-headed Thrush. (*Chimmarrhornis Leucocephalus.*) Eastern Asia.

580. Song Thrush. (*Stachyrodopis Rubiceps.*) Europe and Asia. Woods and meadows, near streams. Excellent singer.

581. Bushcat. (*Pratincola Maura.*) China and India. Very noisy and active. Inhabits pine forests. Feeds on snails, slugs, and insects.

582. Fruit Thrush. (*Pycnonotus Sinensis.*) Male and female. Easily tamed.

Foreign Birds: Bulbuls.

Bulbuls, a branch of the thrush family, belong chiefly to India, although some are found in Africa. Inhabit woods, jungles, and gardens. Feed on fruits and seeds, occasionally on insects. Good singers.

Collections.

583. Crested Bulbul. (*Otocompsa Emeria*.)

584. White-headed Bulbul. (*Hypsipetes Leucocephalus*.) China and India.

585. Short-winged Bulbul. (*Hemixus Ornensis* and *Canipennis*.) China and India.

VOLCANIC ACTION.

Collection 1029: Lava.

Hard, tough, and dark-colored rock formed of masses issued by eruptions from volcanoes. Articles used by jewelers as lava is a cement of volcanic ash and water. The material which covers Pompeii is largely of this nature. Diabase is underground lava.

All lavas are finely crystalline, due to rapid cooling. (1) Obsidian or volcanic glass; (2) volcanic ash; (3) basalt; (4) anorthite, Mount Vesuvius; (5) pumice, used as polishing material; (6) dendritic lava, so called from tree-like formations on surface; (7) manharite.

Collection 1030: Coarsely crystalline igneous rocks.

Found underground. Crystals are coarse because of slow cooling. (1) Pyroxene; (2) diabase; (3) sahlite, the Tyrol; (4) diorite.

Illustrations of volcanoes--Collections.

1031. Various stereoscopic views illustrating volcanic action.

1032. Volcanic action: Fifteen copies of one stereoscopic view—"Mallibon, Strange River of Fire, St. Vincent, British West Indies."

1033. Volcanic action: Fifteen copies of one stereoscopic view—"Mammoth Crater, St. Vincent, British West Indies."

1034. Volcanic action: Fifteen copies of one stereoscopic view—"Crumbling Ash Deposits, St. Vincent, British West Indies."

Collection 1564: Advanced geography--Volcanic explosions.

Apparatus: Test tube, test tube holder, Bunsen burner or alcohol lamp, cork for test tube. Fill test tube three-quarters full of water. Hold over flame cautiously. (Do this over a newspaper laid on desk and point tube away from pupils.) Note how bubbles form at bottom and water is then thrown out. Then fill test tube half full of water, cork *gently*, and repeat heating, taking care that the tube does not point toward pupils. Note how cork is at last thrown out with great violence—an explosion, in fact. Can pupils explain volcanic explosions? Can they explain the earthquakes that accompany volcanic explosions?

NOTE.—Great care on the part of the teacher is necessary in this experiment.

Thirty pictures on volcanoes, earthquakes, and geysers are also given as a lantern-slide lesson.

STEREOSCOPIC VIEWS—MODES OF TRANSPORTATION.

From 6 to 10 views in each collection.

Collection 1467: Transportation on land. Transportation of people; primitive and modern methods.

Collection 1468: Transportation on land. Transportation of freight; primitive and modern methods.

Collection 1469: Transportation by water; primitive and modern methods.

Collection 1470: Transportation, aerial. Methods of aerial transportation.

Twenty-four pictures of modes of travel on land, on water, and in air are also given as a lantern-slide lesson.

A SPECIMEN EXPERIMENT IN PHYSICS.

Collection 1518: How heat is distributed in liquids.

Apparatus: Tubular rectangle of glass, filled with water, a few drops of ink put into opening at top, an alcohol lamp or Bunsen burner. Heat cautiously at one corner over lamp. Notice how ink travels down farther side. How is heat transferred? Why do we heat water at the bottom? How is water heated in the kitchen hot-water tank?

A valuable feature of the school museum is a collection of 174 lantern-slide lessons, 2 of which have been indicated above. Some of the topics with which these deal are descriptive and physical geography, industry, science, history, art, literature, and the ancient world. Regarding these lantern-slide lessons the museum's catalogue says:

Method of picture recitation.

A brief recitation or explanation should accompany each slide shown on the screen. This explanation should be given by the children themselves, so far as it is in any way feasible; it should be very brief, not more than could be written in 3 or 4 lines. A fuller explanation should be deferred. The lantern-slide lesson should not be protracted by lengthy recitations. The time of 20 to 30 minutes should, under no circumstances, be exceeded. Where it seems advisable for a full understanding of the picture on the screen, the teacher of the room or the principal may add a very brief word of further explanation. It is suggested that such questions be asked by the teacher at all points of the lesson as will invite the attention of the children to close observation of the picture before them. It would be a total departure from the intention and purpose of these lessons if they were given in the form of lectures or lengthy explanations. Each lantern-slide lesson should be a series of very brief recitations and the children should be actively engaged in speaking and answering questions while the pictures are shown. They should not be merely passive spectators. The various topics should be assigned beforehand, and a brief explanation, not exceeding 80 words, prepared by each child to whom a topic is assigned. Each recitation should be strictly in reference to the picture on the screen, and not be a rambling talk on some subject which is but indirectly connected with the picture.

In history lessons special care should be taken in this respect. The entire period covered by the lesson is supposed to have been already studied in class, and might be reviewed the day previous to the lantern lesson. When the pictures are before the class the chief attention of teacher and pupils should be directed to the particular incident illustrated and not to the series of events that led up to or followed it.

One room in each school building has been fitted up for these lessons, and the classes go to this room in rotation.

All the material in the museum has solid educational value. There are no objects to arouse mere fickle curiosity; no pictures to incite

surface interest. Every entry is designed to convey information, to arouse the children to thought, to awaken their powers of induction. The stimulus afforded the child's mental self-activity, the almost unlimited possibilities of coordination, the aid to the visualization of knowledge—these three factors in the instructional scheme of the St. Louis schools receive large and peculiar contributions from the school museum.

In addition to the teaching material specifically designed for the inspection of school children, the St. Louis School Museum contains the following collections:

(a) The Study Exhibit for Teachers, consisting of the current teaching material, arranged for personal inspection.

(b) An Educational Exhibit from Foreign Countries, which includes work of pupils in other lands, from the kindergarten through high and normal schools, as well as textbooks, courses of study, reports, photographs, plans and models of school buildings, etc.

(c) A Teachers' Library, of some 7,000 volumes. Each teacher is supplied with a catalogue, which is issued independently of the school museum's catalogue.

PROBLEMS OF ADMINISTRATION.

In the administration of school museums, the very small number of American cities which maintain them find serious difficulties. If every single school is to be supplied with an individual museum, including physical apparatus, scientific specimens, and full geographical collections, the cost would be prohibitive, even for an inadequate equipment.

On the other hand, objections were found, equally serious in degree, to the maintenance of a central museum to which the children may be brought on special trips of inspection. In the first place, it has been the experience of the teachers that children can not be taken anywhere out of the schoolroom without their regarding the affair more or less as a pleasure trip, with consequent detrimental effects upon discipline and class work. Moreover, once the children are in the museum, it is found that their attention can not be concentrated upon the collection which it is the teacher's main purpose to show, but on the contrary the great variety of material about them dissipates their attention with the result that their impressions become surfeited and confused. This was demonstrated in the St. Louis schools some time ago, when the children were taken on trips of inspection to the museum, and the next day were called upon for themes upon their experiences. Some remarkable reminiscences developed.

St. Louis has overcome the objections which its school authorities found in both the decentralized and the centralized systems of management. It utilizes the strength and economy of cooperation by

establishing a museum in which all the schools have a common interest; and, by sending needed material direct to the teacher requesting it, the difficulties incident to personal visits by the children are obviated. Each week the teachers make requisition for the museum material which they need; that material, and no more, is delivered at their schoolroom door, and taken away again when it has been used. The teachers may learn of the contents of the museum, either from a personal visit to the display room or from the voluminous catalogue issued by the authorities.

Two wagons are kept busy delivering collections. For the expedition of this branch of the museum's work, the city is laid off into five sections, equaling the number of days in the school week, and the schools of each section have a delivery once a week.

The popularity of the school museum may be judged by the fact that some 30,000 of the collections were delivered to 100 of the St. Louis schools last year, in addition to 5,000 reference books. During the first half of the present school year more than 20,000 collections and more than 5,000 reference books have been sent out.

The entire expense of the St. Louis School Museum, including the salaries of 7 persons, wagon hire, buying collection material and books, building display cases—in short, every expense incurred during the 7 years of its existence—has been carried by an appropriation from the school board averaging \$7,600 annually. This is an average annual outlay of 9½ cents per pupil enrolled in the St. Louis public schools. The appropriation this year is \$10,500.

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THE DUTCH SCHOOLS OF NEW NETHERLAND AND COLONIAL NEW YORK

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LETTER OF TRANSMITTAL.

DEPARTMENT OF THE INTERIOR,
BUREAU OF EDUCATION,
Washington, D. C., March 28, 1912.

SIR: No comprehensive history of education in America has yet been written. Until quite recently there has been little general interest in the growth and development of educational institutions, systems, and practices in this country. We have been busy building new institutions, making and remaking systems, and trying to adapt our practices to the needs of our rapidly-growing political and industrial democracy. Our interests have been in the present and the future. There has been little time for gathering, organizing, and interpreting the materials of history. There must soon come, however, an insistent demand for such work. No people can afford to remain ignorant of its past life and the means by which its institutions have grown. Everywhere history, truthfully recorded and rightly interpreted, becomes the best guide to progress. This is true in education no less than in government and economics.

Before any comprehensive history can be written, the materials must be collected and verified. Little of this preliminary work has yet been done. It must be accomplished by many industrious students working patiently at the task in different sections of the country. It should be done for every section of the country while the material is available and before it is permanently lost.

Several years ago some valuable studies of this kind were made under the direction of the Bureau of Education, and the results were published in separate bulletins or in the Annual Reports of the Commissioner, but for want of funds to do the work thoroughly and because of more important duties, they were discontinued. Recently Dr. William Heard Kilpatrick, Assistant Professor of the History of Education, Teachers College, Columbia University, has made a very thorough and accurate study of some of the Dutch schools of New Netherland and colonial New York. Much of the material used in this has since been destroyed by the fire in the capitol at Albany. Dr. Kilpatrick has kindly offered his manuscript, which has much present and permanent value, to the Bureau of Education, and I recommend that it be published as a bulletin of this bureau.

Very respectfully,

P. P. CLAXTON,
Commissioner.

The SECRETARY OF THE INTERIOR.

PREFACE.

The scope of this work is probably indicated with sufficient clearness by the title. There were in New Netherland both Dutch and English settlements; the schools of the former only are included in the study. For a long time after the English took over the colony, the Dutch clung to their language and customs. The effort herein made is to trace the history of these Dutch schools, beginning with their first transplanting from the United Netherlands and continuing down to the American Revolution, by which time the Dutch population was in large measure merged in the common American stock.

The investigation has been made with varying degrees of exhaustiveness. So far as concerns the New Amsterdam schools and the part played by the central colonial authorities in educational affairs, it is believed that few important references have been overlooked—that is, in so far as the material exists at present in America or has been made available in Europe. Likewise, the New Amsterdam school, as continued in the school of the New York (City) Reformed Dutch Church, is probably presented with approximate fullness. The Dutch villages, however, have not been treated with the same thoroughness. Their records, even where they survive, are on the whole relatively inaccessible. Flatbush only has been presented with even tolerable adequacy. Much remains to be done in the way of bringing together the materials for a history of these village schools. If this bulletin will in any degree lead to so desirable a result, one main purpose of publication will be attained.

Of those who have rendered assistance a few only can be named. The authorities of the Flatbush Reformed Dutch Church kindly granted me access to their manuscript records. Dr. F. L. van Cleef, of the Kings County Hall of Records, has helped me with these church records as well as with the public records in his care. To Mr. A. J. F. van Laer, the archivist of the State of New York, I am indebted for invaluable assistance along many lines. In addition to help with the colonial records under his care, he has read my entire manuscript and has made many suggestions which I have been glad to accept. To Prof. Paul Monroe I am indebted for the standards of scholarship which I have sought to embody in this work. To the encouragement and untiring cooperation of my wife I am due a debt beyond the knowledge of those who have not received similar help.

W. H. K.

THE DUTCH SCHOOLS OF NEW NETHERLAND AND COLONIAL NEW YORK.

CHAPTER I.

GENERAL INTRODUCTION.¹

The West India Company, which founded the colony of New Netherland and controlled it throughout the whole of the Dutch period, was chartered in 1621 by the States-General of the United Netherlands.² The powers granted were ample; among them a monopoly of the Dutch trade within certain wide areas, including "the countries of America, or the West Indies;" and authority "in our name" to "promote the settlement of fertile and uninhabited districts," to appoint governors and officers of justice, and "to do all that the service of this land and the profit and increase of trade shall require." The government of the company was "vested in five chambers of directors," of which that at Amsterdam was the most important. The "general assembly of the aforesaid chambers" was to "be by nineteen persons," divided among the several chambers, except "that the nineteenth person, or so many more as we shall at any time think fit, shall be deputed by us for the purpose of helping to direct the affairs of the company in the aforesaid assembly." This assembly of the XIX assigned the direct supervision of New Netherland to the Lords Directors of the Amsterdam chamber.

The States-General retained an interest in such work of colonization as might be carried on by the company. In addition to the stipulated right of appointing one or more deputies to the XIX, they reserved also the right of approving the selection of the director general (the governor of the Province), and of reviewing his instructions. Besides these, as events show, they retained a general oversight of the company's control of New Netherland, in accordance with which they interfered at times to reform abuses.

The West India Company, after two years of preliminary preparation, began the colonization of New Netherland as its first work. Some 30 families were sent over in 1623 and scattered among the

¹ The chief authority in the discussion of the chapter is Brodhead's *History of New York*. Osgood's *American Colonies of the Seventeenth Century*, vol. 2, covers much of the same ground. To neither of these will footnote references be given in this chapter.

² For the charter, both in Dutch and in English, see the Van Rensselaer-Bowler Manuscripts, pp. 86-125.

various regions which the company intended to hold, the South (Delaware) River, the Fresh (Connecticut) River, Waalbogat (Wallabout), Manhattan, and Fort Orange (Albany). Of these first settlers, Fort Orange took the largest share. The next year more families came from Holland. In 1626 Peter Minuit, the director general, purchased for the company the island of Manhattan, on the southernmost point of which he built Fort Amsterdam. The families which had settled at Fort Orange and the South River were then brought to Fort Amsterdam, which thenceforth became the most important settlement of the Province.

In 1629 the company, having found colonization very expensive, was thus finally persuaded to allow to its stockholders the privilege of establishing the quasi feudal "patroonships." To this end it adopted and promulgated (June 7) a charter of "Freedoms and exemptions for the patroons, masters, or private persons who shall plant any colony in, and send cattle to, New Netherland."¹ A patroon must "plant there a colony of fifty souls upwards of fifteen years old within four years." Within restrictions as to extent, the patroons might choose unoccupied land anywhere in New Netherland, except that "the company reserved to itself the island of Manhattan." The land so chosen they were "forever to own and possess and hold from the company as a perpetual fief of inheritance." They could "dispose of the aforesaid fiefs by will." The patroons were authorized to furnish their colonists with proper instructions for government. "In case anyone should in time prosper so much as to found one or more cities, he shall have authority to appoint officers and magistrates there." Private persons might, "with the approbation of the director and council there, choose and take possession of as much land as they can properly cultivate and hold the same in full ownership."

Clause XXVII of this charter of freedoms and exemptions, which has frequently been used by writers on the educational history of New Netherland, reads as follows:

The patroons and colonists shall in particular endeavor as quickly as possible to find some means whereby they may support a minister and a schoolmaster, that thus the service of God and zeal for religion may not grow cool and be neglected among them, and they shall for the first procure a comforter of the sick there.²

It is to be noted that the proposed scheme of patroonships contemplated a system of private colonies independent of each other save in their subordination to the general power of the company. Besides these subordinate colonies, New Netherland was to include the company's own settlement on Manhattan, and perhaps other settlements which the Lords Directors should later make. By the twenty-

¹ The original Dutch of this document and the English translation made by Mr. Van Laer are found side by side in the Van Rensselaer-Bowler MSS., pp. 136-153.

² Van Rensselaer-Bowler MSS., p. 151.

eighth article of the Freedoms, each such subordinate colony was to appoint an agent who should report at least once a year to the director and council. We may anticipate by saying that only two such subordinate colonies, other than those settled by the company, progressed sufficiently far to have an educational history, that of Kiliaen van Rensselaer just above Fort Orange (Albany), begun in 1630, and that founded in 1656-57 by the city of Amsterdam on the South River (New Castle, Del.).

New Netherland grew slowly. The company was more concerned to secure immediate returns through the fur trade than it was to further the progress of colonization. Wouter van Twiller (1633-1638), the third director general, and Willem Kieft (1638-1647), his successor, were both incompetent. Peter Stuyvesant (1647-1664), the last of the Dutch governors, was far from being incompetent; but it is open to question as to how much the growth of the colony was hindered by his unwise and autocratic management.

Satisfactory estimates of the population are difficult to make. Manhattan (New Amsterdam) had in 1628 some 270 inhabitants all told; in 1643 some 400; in 1652 about 700; in 1656, by actual count, 120 houses and 1,000 souls; in 1664 about 1,500 inhabitants. New Netherland is estimated to have had 500 inhabitants in 1630, while Massachusetts had 1,300 and Virginia 3,000. The corresponding figures for the next three decades are, in round numbers: 1640, New Netherland 1,000, Massachusetts 14,000, Virginia 8,000; 1650, New Netherland 3,000, Massachusetts 18,000, Virginia 17,000; 1660, New Netherland 6,000, Massachusetts 25,000, Virginia 33,000.¹

The Dutch villages chartered before the English occupation were Breuckelen (Brooklyn) in 1646; Beverwyck (Albany) in 1652; New Amsterdam in 1653; Midwoud (Flatbush) and Amersfoort (Flatlands) in 1654; New Amstel (New Castle, Del.) in 1657; New Haerlem (Harlem) in 1660; and Bergen (now within Newark, N. J.), Boswyck (Bushwick), New Utrecht, and Wiltwyck (Kingston), each in 1661.²

As stated above, the government of New Netherland was in the hands of the Lords Directors, who placed the local management of the Province, and to a considerable degree that of New Amsterdam in the hands of a director general and council. The powers granted by the Lords Directors to these, their representatives, were not formally defined, but were determined in good part through correspond-

¹ See discussion of colonial population in *A Century of Population Growth in the United States, 1790-1900*, pp. 3-15.

² There were on Long Island several English towns chartered by the Dutch, Hempstead (1644), Flushing (1645), Gravesend (1645), Newtown (1652), and Jamaica (1656). As these were English-speaking towns the consideration of their schools does not fall within the scope of this work. The occupation by the English here referred to is that of 1664. In 1673 other charters were issued to all these villages by the Dutch governor, Colve.

ence, as occasion arose. On the whole, the situation was quite analogous to that existing to-day between any commercial company and its distant agents. The director general was expected to see to the interests of the company and to report frequently and fully in order that he might be properly instructed. Naturally, considerable discretion was lodged in him, which—to use no harsher term—he exercised freely. In matters of civil law and procedure the Holland laws and customs were supposed to hold, unless there were specific contrary enactments. So autocratic was the government of the several directors general that repeated complaints were made both to the company and to the States-General.

The Great Remonstrance of 1649¹ made such a stir in Holland that the company was forced to grant to New Amsterdam a city charter. The promised city government was to be “as much as possible” like that of old Amsterdam; but when the charter went into effect in 1653 it was “hampered,” says Brodhead, “by the most illiberal interpretations” which Stuyvesant could devise. The powers granted were few, and the two burgomasters and five schepens were all appointed directly by Stuyvesant himself. Only after repeated petitions were the outgoing burgomasters and schepens allowed to nominate a double number of each, from whom Stuyvesant chose the proper number to form the incoming magistrates. The burgomasters and schepens met conjointly to form at once a town council for petty municipal legislation and a court of justice to try offenders against the city laws. The burgomasters met, besides, as a separate body from the schepens (at least from the beginning of 1657), to attend to the more purely administrative features of the city government. Each of these bodies left fairly satisfactory minutes of its proceedings, and from them we derive much of our information regarding the schools.

Municipal government in the outlying villages was quite similar to that of New Amsterdam. Each had an inferior court of justice consisting usually of a schout and several schepens, the latter selected by the director general and council from a double set nominated by those just retiring. At no place in the whole scheme of government had the people a right to express their wishes. The company, save for a certain supervision by the States-General, was supreme. The Lords Directors appointed the director general and his council. The director general appointed the magistrates of New Amsterdam and of the outlying villages, either out and out, or by selection from nominees made by the succession which thus owed its origin and continued direction to him. While in spite of Stuyvesant's hatred of representative government the municipal governments probably did, in fact, with approximate faithfulness, represent the wishes of

¹ N. Y. Col. Doc., 1, 271-318.

the commonalty, still New Netherland could in no proper sense be called a democracy.

The officially recognized religion of the Netherlands and their dependencies was that of the Reformed Dutch Church. The peculiar doctrines of this church do not concern us. As to church government, the local congregation seems to have had about the same amount of ecclesiastical independence that we see at the present among the Presbyterian Churches of America. Its executive committee—to use a secular term—was the consistory, composed (in America) of ministers, elders, and deacons, who varied in number according to local need. The consistory was, in its discretion, either directly or indirectly self-perpetuating, that is, its members might either select outright their successors (elders and deacons), “or they may propose a double number, the half to be chosen by the congregation.” The choice in either case was subject to approval by the church; but any disapproval, it appears, was expressed not so much by a vote of the church membership as by complaint to the consistory.¹ In a somewhat similar manner and with like restriction the consistories selected the minister² and any other officials, including (sometimes) the schoolmasters.³

A number of neighboring local churches (in Holland) formed a classis, which had the exclusive right of examining and licensing ministers.⁴ The Classis of Amsterdam particularly concerns us because to it was given the charge of the New Netherland churches (see page 71ff), and this charge carried with it a certain oversight over the schools of New Amsterdam. The actual work of the classis was mostly carried on by a standing committee, the *deputati ad Indicantes*, or briefly, the deputies. A number of classes constitute a particular synod, e. g., the particular Synod of North Holland. On unusual demand there might be called a general or national synod of the whole church, as, for example, the Synod of Dort (Dordrecht), which, in 1618–19, committed the Reformed Dutch Church definitely to Calvinism. The relations of these several ecclesiastical bodies to the New Netherland schools will be discussed in a subsequent chapter.

The ministers of the Reformed Dutch Church were properly university graduates or of equivalent training. Apparently this standard was pretty well maintained. The customary title of respect given to the minister was “domine,” the vocative case of the Latin dominus. In writing, this was often abbreviated to Dom^e or D^e. In addition to the ministry there were other subordinate officers in the local church, frequently combined in one individual: The “siecken-trooster” or comforter of the sick, sometimes called

¹ For further discussion of this point see Ecclesiastical Records, pp. 1150, 3900–1, 4005–6, 4057–8, 4073, 4074, 4082, 4104–5, 4212, 4220, 4238.

² Eccl. Rec., pp. 4218–19.

³ *Ibid.*, pp. 1152–3.

⁴ *Ibid.*, p. 4219.

the "krank-besoeker" or visitor of the sick; the "voorlezer" or reader; and "voorsanger" or precentor. The siecken-trooster was charged "to instruct, admonish, and comfort the sick and ill out of God's Holy Word, every one according to his necessity, and as occasion permits."¹ He thus was an assistant to the minister. Where it was not feasible to have a regular minister, a siecken-trooster might in a measure serve instead, by leading in the service and reading a sermon. But he must "never arrogate to himself * * * under any pretext whatever anything which properly belongs to the ministerial office."² The voorlezer's duty was "before the sermon to read a chapter out of the Bible and the Ten Commandments" and besides, as clerk, to keep the church records. The voorsanger "set the psalms." The voorlezer and voorsanger were almost always one; and these offices, especially in the small places, were usually filled by the schoolmaster.

Since the schoolmaster's pay is frequently given in terms that are not self-explanatory, a few words about the currency of New Netherland may not be out of place. To speak generally, this was of three kinds, the coin of Holland, beaver skins, and wampum. The first-named was, as money goes, fixed in value throughout the period of our discussion. To distinguish it from the fluctuating wampum, such terms as Holland money, Hollands, coin, or heavy money, were used. The unit was the florin or guilder, consisting of 20 stivers, and worth about 40 cents of our money. The beaver remained fairly constantly fixed at 8 guilders, and in the absence of coin was counted "the surest pay in this country." The wampum, or seawant, was made from a shell found principally on Long Island. The black wampum was twice as valuable as the white, while whole and well-strung wampum was worth more than the broken or loose. For a time the rate was fixed at 3 black or 6 white wampums to the stiver. This rate was, toward the end of the Dutch period, many times changed, in order to keep this currency on a par with coin. But the effort was in vain; the seawant constantly deteriorated. In 1660, for example, 2 guilders of seawant were worth only 1 of coin;³ while by 1677 the rate had fallen to 5 of wampums for 1 of coin.⁴ Contracts, especially in the rural districts, were frequently expressed in terms of commodities, principally in wheat. The unit of this measurement was the schepel, about three-fourths of a bushel. When school contracts are given in wampum or wheat, the current equivalent will usually be given in coin.

The Dutch continued in power until 1664, when the Province was occupied by the English in the name of the Duke of York. The first English occupation (1664-1673) reserved to the Dutch a large

¹ Eccl. Rec., p. 96.

² *Ibid.*, p. 97.

³ *Ibid.*, p. 495.

⁴ *Ibid.*, p. 701-2.

share of influence. The city school of New Amsterdam, for instance, was continued as the city school of New York, the same city schoolmaster was retained and, accordingly, the use of the Dutch language was continued. The Reformed Dutch Church was continued as the established religion of the city. The city government was, for about a year, continued identically; after that, it was preserved with some changes, the principal one being that the colonial governor appointed the body of officials.

For a portion of the Province, including Long Island, there were promulgated the so-called Duke's Laws, which were an adaptation of the New England township system. The villages of Flatbush and New Haerlem will show the working of this system in essentially Dutch communities. In these the town court reappeared with English constable and overseers in place of the Dutch schout and schepens. Instead of the old Dutch double nomination system, the new plan provided that the local court officials should be chosen "by the major part of the householders of the said parish."¹ The special duties of this local court were "the making and proportioning the levies and assessments for building and repairing the churches, provision for the poor, maintenance of the minister; as well as for the more orderly managing of all parochial affairs."¹ The Duke's laws further provided that "every inhabitant shall contribute to all charges both in church and state—according to the equal proportion of his estate."² The New England town meeting was recognized and given power to arrange "the private affairs" of the several towns. The vote in such was to be "given and determined by the inhabitants, freeholders, and householders without restriction."³ In particular the minister should be "duly elected by the major part of the inhabitants householders."⁴ The church arrangements here contemplated merely recognized the *de facto* establishments of religion already existing in the several towns, whether Reformed Dutch, Congregational, or Presbyterian. The general effect of the new laws was to grant a larger share in direct control of affairs to the people than had obtained among the Dutch.

The short return to power of the Dutch in 1673–74 has little of interest for our study. Aside from one interesting case brought before the provincial governor from Bergen (see p. 206), and a school provision in the village charters promulgated by Gov. Colve, the writer has found no school matters which were in any way concerned with this Dutch Government.

The attitude of the English upon their second return to power (1674) was quite different from what it had previously been, especially in New York City. The Reformed Dutch Church in that town was

¹ Col. Laws of N. Y., I, 24.

² *Ibid.*, p. 26.

³ *Ibid.*, p. 64.

⁴ *Ibid.*, p. 25.

no longer the established church, though, in accordance with article 8 in the capitulation of 1664, it retained in certain respects a standing in the colony almost coequal with that of the Church of England. The Dutch school in New York was henceforth only the private affair of the local Reformed Dutch Church. But these changed conditions did not obtain in the Dutch villages. In these, the Reformed Dutch Church and the Dutch school, at least in some instances, continued until the Revolution to be the official church and school, supported and controlled in one form or another by the local secular authorities.

A new requirement introduced by the English was that all schoolmasters be licensed. This was in imitation of a long-established law in England, designed to guard against dissent. Before 1686 the Governor alone granted the licenses. After that date by special instructions from the Crown, the Archbishop of Canterbury (later the Bishop of London) must license schoolmasters coming from England. The last noted royal instruction on the licensing of teachers was in 1721.¹ The requirement was not rigidly enforced, the Dutch especially being exempt. The year 1712 apparently marks the end of the enforcement.

The colonial authorities of New York did little for education. Besides the establishment of two Latin grammar schools at different periods in New York City, and the legislation connected with the founding of King's College (Columbia University), absolutely nothing was done by the general assembly with intent to influence the schools of the Province. The laissez-faire policy, so far as elementary education was concerned, reigned supreme.

¹ See N. Y. Col. Doc., iii, 372, 688, 821; iv, 288; v, 135-136; Dix, *Trinity Church*, i, 138; N. Y. Col. MSS., lxi, 6.

CHAPTER II.

THE SCHOOLS OF THE NETHERLANDS IN THE SEVENTEENTH CENTURY.

Of all colonies, those founded from commercial considerations show most nearly the identical transfer of the institutional life of the parent country. In no instance, probably, has this been truer than in the case of New Netherland. No alienating persecution had brought the Dutch to the American shores. There was no cause for its settlers to criticize even a single custom of the loved "fatherland." On the contrary, conscious pride in the deserved glory of the United Netherlands—then at the zenith of their prosperity—determined them to transplant the old life as little changed as possible.

Among the institutions carried thus to the New World, few, if any, had deeper roots in the life of the Dutch than church and school. Devotion to the principles of the reformed religion had been, in great degree, the secret of the long and stubborn opposition to Spanish oppression. That same devotion had been the greatest single force in creating the new commonwealth. As a most important means of fixing and preserving the reformed faith, the parochial school had become an indispensable part of the organization of the new church. Interwoven thus with the very life of the church was a school system in which the schoolmaster was an officer in the church, and the curriculum of the school included conscious preparation for participation in the service of the public worship.

How the school came to occupy this unique relationship to the church can here be told only in barest outline, since the account of it would be the story of the growth of the church itself. Even before the reformers could assemble openly in the Netherlands, the first national synod of the Dutch Church, held "in exile" at Wezel in 1568, had seen the strategic value of the parochial school. Music, it declared, must be introduced into the church schools, of which some were already in existence.¹ Schoolmasters as well as parents must train the children in the catechism.² Deacons were specifically charged with "the care and founding of schools;"³ and schoolmasters were reckoned along with the ministers, elders, and deacons as "public persons" of the church.⁴ The second national synod at

¹ Rutgers, F. L. *Acta van de Ned. Syn. der 17de Eeuw*, p. 20.

² *Ibid.*, p. 21.

³ *Ibid.*, p. 26.

⁴ *Ibid.*, p. 27.

Emden in 1571, likewise "in exile," to the same end, required all classes¹ in their regular meetings, to ask of each church "whether the care of the poor and of schools is maintained."² The provincial Synod of Dort (1574), the first on Netherland soil, treated schools in yet greater detail, emphasizing, among other things, the careful selection by the church of proper places for schools, adequate salaries for schoolmasters to be furnished by the secular authorities, and subscription to the creed by all schoolmasters. Limitations of space forbid the presentation of all the acts relating to schools of the successive national synods. The Synods of Dort (1578),³ Middleburg (1581),⁴ and The Hague (1586),⁵ all treated of schools and of the duty of the church to support them. The great Synod of Dort (1618-19),⁶ as the last of the national synods, gave final form to the creed and practice of the Dutch Reformed Church. In the matter of schools, it substantially summed up the preceding synodal enactments. Schools must be instituted in country places, towns, and cities. Religious instruction must be given. The Christian magistracy should see to it that well-qualified persons taught with suitable compensation. The children of the poor should be instructed free. In all schools only orthodox Christians might teach. To secure these ends suitable means of church inspection of schools were devised. By the time of this synod the church had not only thoroughly organized its system of parochial schools, but through the requirement of creed subscription had reached out its hand to all educational institutions of whatever grade.

But it must not be supposed that the church alone was interested in education. From an early date the Dutch had taken an increasing interest in the public control and support of education. In Haarlem the "city school" existed certainly as early as 1461.⁷ In the same city, in 1522, we find the burgomasters guaranteeing a salary of 200 carolus guilders to the rector of the school.⁸ The Hague in 1536 had a "great school" with a rector and three masters, supported in part by a per capita levy of 2 carolus guilders upon all the pupils in the private schools of the city. To this income the city added for the rector "a yearly pension of four or five great pounds."⁹ Utrecht, both city and Province, may be taken as typical of public secular

¹ A *classis* was an ecclesiastical body composed of a considerable number of neighboring churches.

² Rutgers, *op. cit.*, p. 106. This requirement was repeated by the first national Synod of Dort in 1578 (*ibid.*, p. 243), by the national synod at Middleburg in 1581 (*ibid.*, p. 386), and by the national synod of The Hague in 1586 (*ibid.*, p. 496).

³ Rutgers, F. L., *op. cit.*, pp. 243, 246-247.

⁴ *Ibid.*, pp. 380-1, 386, 408, 425, 442, 443, etc.

⁵ *Ibid.*, pp. 492, 496, 539-557, 611.

⁶ Brandt, *History of the Reformation*, III, 33-4, 319-320, 321-2, 326; Dunshee, *op. cit.*, pp. 3-5.

⁷ Enschedé, A. J., *Inventaris van het archief der Stad Haarlem*, I, 155.

⁸ *Ibid.*, I, 166.

⁹ Buddingh, D. *Geschiedenis van opvoeding en onderwijs in de Nederlanden*, tweede stuk, tweede gedeelte, pp. 197 ff.

interest in schools. As early as 1522 is found a payment by the municipal authorities to the "rector scholarium" on account of a chorus.¹ In 1567 the city paid an item of 4 pounds for "the benches for the school children in Jesus School."² Some years later a similar appropriation was made for the free instruction of poor young children.³ In 1576 it was resolved by the city thenceforth to maintain the St. Jerome School "with adequate salaries."⁴ Numerous records of instructions issued in the seventeenth century to rectors and masters of this school give a very good account of the inner working of the Latin school among the Dutch of that period.⁵ A church order for the whole Province of Utrecht was issued in 1590 and another in 1612. In the latter were included directions for schools, schoolmasters, and sextons. Schools of four kinds were recognized, public or trivial,⁶ parochial, private, and schools for the country districts. The selection of instructors, the fixing of curricula, and the general supervision were given to municipal authorities, with varying degrees of participation in control granted to the church.⁷ In 1644 the city of Utrecht adopted a detailed plan for the free instruction of the poor by apportioning them among its four parochial schools.⁸ The country schools of the Province were regulated separately in an order of 18 sections issued in 1654, one of the best available accounts of Dutch school management of the seventeenth century.⁹ In matters of education, there is no reason to suppose that Utrecht was in advance of other Provinces of the United Netherlands. Before the Reformation public schools were found in individual cities. Beginning about 1580 the Provinces took up the work, making general regulations for the control of schools everywhere. By the middle of the seventeenth century the whole country—rural districts as well as cities and towns—appears to have been well provided with schools of various grades, controlled and often also supported by the public secular authorities.

The relation of church and state in the control of these schools was a matter of considerable concern to the interests involved. On the one hand was a vigorous minority of Calvinists who wished to use the governmental machinery to enforce their ideas of church doctrine and policy. On the other was a larger body of people, Roman Catholics, Arminians, Mennonists, and men of relatively independent

¹ Van Flensburg, *Archief voor kerkelijke en wereldsche geschiedenis* * * * van Utrecht, III, 183. The school (St. Jerome) had at the date named apparently been long established.

² *Op. cit.*, p. 240.

³ *Ibid.*, p. 246.

⁴ *Ibid.*, VII, 392.

⁵ *Ibid.*, pp. 366 ff.

⁶ A trivial school was originally a Latin school teaching the trivium. See p. 96 ff.

⁷ Buddingh, *op. cit.*, pp. 36 ff.

⁸ *Ibid.*, pp. 91-3. The ordinance was promulgated by the city authorities without (specific) reference to ecclesiastical sanction.

⁹ *Ibid.*, pp. 69-76.

religious ideas, who agreed among themselves only in resisting the encroachments of the Calvinists.¹ So aggressive, however, was the strict Calvinistic party that it dominated the church almost completely, and, through that, exerted an influence on legislation out of proportion to the relative number of its adherents. In this contest, the school was one of the strategic points. The party which could fix the curriculum, select the textbooks, and certificate the teachers, all to suit its ideas, would eventually carry the day; for practically every child in the provinces went to school. The Calvinistic party saw this point with clearness, and moved toward it with a precision admirable in its effectiveness. At this time it was a part of the common law of the Netherlands—if we may use an English term and theory—that, with regard to schools of whatever grade, the local magistracy should appoint the masters and give instructions as to books and curriculum. The strict church party accordingly sought through church orders, promulgated by cities and Provinces, to have by statute law the power granted to church officials of certificating teachers and advising with the magistracy in the control of schools. The fact that Roman Catholics were suspected of favoring Spain aided the Calvinists in securing such legislation. Thus in the Province of Zeeland, where the Calvinists were early in power, there was issued by 1583 a *kerkenordnung* which gave larger power over the schools into the hands of the church. “No one henceforth in the lands of Zeeland,” so reads this ordinance, “in the towns, as well as in the country districts, shall be accepted for the school service, nor shall any already in service be allowed to continue, except those who shall have been judged thereto fit and capable by the classis of each island of Zeeland, respectively, where the same resides or will reside, having been beforehand examined in life and doctrine. * * * These and no others may be accepted or retained by the magistrates.”² And it was further enacted that “the aforesaid schoolmasters shall not be allowed to teach other books than those judged to be fit and suitable for the youth by the classis, as well in the little children’s schools as in the Latin schools for the advanced pupils.”³ To the same effect, the Earl of Leicester, representing Queen Elizabeth in the control of Dutch affairs, issued in 1586 an order intended to be binding throughout the United Netherlands, in which the consistory or classis was to certificate all schoolmasters, after an examination “first as to purity of walk and then in knowledge and godliness of life.” All schoolmasters must first “subscribe to the confession of the Netherlandish church.” For the management of Latin (“particu-

¹ It is not generally known that as late as 1584 a majority of the people, except in Zeeland, were Roman Catholics. (Blok, *History of the People of the Netherlands*, iii, 190.); while even in 1640 nearly one-third of the total population were still adherents of this faith. (*Ibid.*, iv, 124.)

² Buddingh. *op. cit.*, p. 8.

³ *Ibid.*, p. 10.

lar") schools, there should be chosen each year "certain curators from the magistracy and the consistory" "so that the success of these (schools) may be assured."¹ It was to secure the enforcement of such regulations that the Great Synod of Dort (1618-19), the climax of Calvinistic power, made it "the duty of the ministers, with an elder, and if necessary, with a magistrate to visit all the schools, private as well as public"; and to the same end, placed a somewhat similar obligation upon the classis to inspect the churches and schools within its territory.²

The party in opposition to the Calvinists was able to thwart in some considerable measure these efforts of the strict church people. In the first place, the edicts of church synods by no means controlled the action of the civil authority. On the contrary, approval by the government of a Province was necessary to give to the synodic acts the force of law in that Province. We accordingly find the States General of Holland giving only a "provisional and limited approval" to the *kerkenordnung* of the synod of The Hague (1586),³ especially as pertained to the choosing and installing of ministers and schoolmasters. The same Province later took similar action with regard to edicts of the Great Synod of Dort (1618-19), and not only specifically declared that "no acts, or decrees, of a synod should be of force to bind any person, without a previous approbation by states;" but even adopted amendments to the twenty-first and forty-fourth articles of church order whereby the right of appointing schoolmasters was specifically reserved to the civil authorities.⁴ Actual school orders of the period show the same disposition to keep control in secular hands. The school order of the Province of Utrecht in 1590 provided that "so far as concerns the schools, they shall stand at the disposal and order of the magistracy in each city." Elsewhere, in the document the reformed religion was distinctly recognized, but nowhere in it were the church officials given any power whatsoever in the management of schools.⁵ In another school order of the same Province, that of 1612, it was arranged that rectors of the city trivial schools should be appointed and installed by the magistrates, who were also to give instructions, "with the advice of the deputies of the synod." There seemed, however, no legal way of enforcing the "advice." Similarly, "the parochial schoolmasters in the city and towns, together with the *voorlezers* and sextons," were to be appointed "by the respective magistrates with the advice of the consistory." "Books and authors" were to be prescribed by the respective magistrates, but must be such as would not "turn the youth away from the Christian reformed religion."⁶ Still further, even when the laws

¹ Rutgers, *op. cit.*, p. 638 ff.

² Dunshee, *op. cit.*, p. 4; *Eccl. Rec.*, p. 4222.

³ Rutgers, *op. cit.*, p. 625.

⁴ Brandt, *op. cit.*, iv, 163, 165.

⁵ Buddingh, *op. cit.*, p. 35.

⁶ *Ibid.*, p. 36 ff.

allowed the church a certain control, the local civil authorities exercised a broad discretion in their enforcement of such laws. Thus the particular Synod of South Holland was informed in 1624 that the rector of a Latin school at Gouda had published a school program in which optional catechism was advertised, and the substitution of a lesson in Cato's Distichs was allowed in place of attendance upon the regular Sunday church service.¹ The synod strongly disapproved of this advertisement and tried for six years to have the laws forbidding such executed; but in vain. The magistrates agreed in theory with the synod, but would not reduce the rector to obedience; and in this status the affair finally rested.² In 1628 Lutheran and Catholic masters in the same school declined to subscribe to the creed, but after being dismissed according to law, they were brought back by the magistrates.³ In like manner, Catholic schools at Noordwyk and Culemborg troubled the synod for many years. Although the law required the creed subscription of all, nothing could be done to close these schools; the civil authorities would not act.⁴ In such ways did political expediency thwart religious zeal. The schools remained the joint concern of both church and state, with the state the dominant party.

This joint control, while differing in different times and places, seems on the whole to have been settled in such a way that in religious affairs the church had a determining voice, while in all other matters the secular authorities controlled. The division of influence would thus differ according to the kind of school. In the Latin schools of the city the church saw to it that the masters signed the creed, that the catechism was taught, that no bad books were used, and that the pupils attended the regular Sunday church service. But even here the minister and consistory could only use moral suasion; the enforcement of the laws lay finally with the secular body. As regards the parochial school, whose master was usually also voorlezer and voorzanger, the church had a larger share of influence. The master was seldom, if ever, chosen without at least the advice of the consistory.

In the control, however, of even the parochial schools the secular authorities might act without specific reference to the consistory. Thus the Utrecht act of 1644, adopted by the common council for the free instruction of the poor, prescribed how many such free pupils each parochial school should teach without even a suggestion that the churches had any voice in the decision.⁵ In conclusion, then, as to the relation of church and state in school affairs, the principal power of the church lay in the generally acknowledged right to examine as

¹ *Acta der Particuliere Synoden van Zuid-Holland* (Knuttel), i, 114.

² *Ibid.*, pp. 141, 167, 205, 249, 292-3, 329.

³ *Ibid.*, p. 281.

⁴ *Ibid.*, ii, 369, 418; iii, 15-7, 51-2, 97, 114-5, 157, 219, 271, 280, 317, 336, 429, 534, 536.

⁵ Buddingh, *op. cit.*, p. 91 ff.

to creed subscription,¹ to enforce which there had been devised the regular visitations of church and consistory for local supervision, and that of the deputies of the classes for a more general oversight. On the other hand, the strength of the secular side lay in the facts, first, that, most strictly speaking, the Reformed Church had never been officially established as the exclusive State church of the Netherlands,² and, second, that not only did financial support come from the civic authorities, but legal ownership and control was vested in the Government. So that even parochial schools—nay, the churches themselves—were public institutions under the ultimate control of the secular Government.

Because of our primary interest in the schools of New Netherland, it is the parochial school of the Netherlands that interests us most. In the early seventeenth century one "Dirck Adriaensz Valckoogh, schoolmaster at Barsingerhorn," published "a fit and profitable little book called the Rule of the Dutch Schoolmasters."³ The book gives Valckoogh's own practice, and as such forms our best source for the period. "The ideal teacher," so says Mr. Valckoogh, "is a man who is gentle, true, of good family and of good reputation. He is a man who knows how to write a good hand and who is good at reading; who knows *sol-fa-ing* and who can sing the psalms from notes; who neither lisps nor speaks too low; who can write letters and requests; who understands the Scriptures so that he can educate the people; and who knows how to set a clock, how to manage, oil, and clean it."⁴

No master could teach even in a private school before he had been granted a license.⁵ For this an examination was usually prerequisite, at least so far as to ascertain the religious and moral fitness of the candidate. Apparently none but elementary schoolmasters were examined as to scholarship. Letters of credential as to life and doctrine were of course passed upon by the appropriate appointing bodies. Subscription to the creed, made formally in a book kept publicly for that purpose, was common.⁶ Actual examination as to scholarship was frequently conducted by the local ministry, by the consistory, or by the *classis*.⁷ The license to teach was variously

¹ This power the church authorities sought to render more secure by insisting that no one be allowed to teach who was not at the same time a member of the church. Sometimes even the whole family must be members of the orthodox church. Ecclesiastical jurisdiction over church membership would thus readily give increased leverage in school control. Brandt, *op. cit.*, iv, 138; Nederl. Archief v. Kerkel. Gesch. (Kist en Royaards), iv, 30; Buddingh, *op. cit.*, p. 70.

² Blok, *op. cit.*, iv, 276.

³ Alckmaer, 1607 (reprinted 1875). For selections, see Buddingh, *op. cit.*, p. 104 ff. and Schotel *Het Oud-Hollandsch Huisgezin der 17de Eeuw*, p. 78 f.

⁴ This is an adaptation from Valckoogh given by Douma, *Geschiedenis van het lager onderwijs in Nederland*, p. 68.

⁵ Buddingh, *op. cit.*, p. 12 (Holland and W. Friesland, 1581); *ibid.*, p. 7 (ditto, 1591); *ibid.*, p. 34 (Utrecht, 1586), etc.

⁶ For example, the city of Haarlem has in its archives a register of such creed subscriptions covering the years 1628-1795.—Enschedé, *op. cit.*, ii, 96.

⁷ *Acta van part. Syn. van Zuid-Holland*, iii, 479; Buddingh, *op. cit.*, pp. 41, 77; Rutgers, *op. cit.*, p. 640 (Leicester's school order, 1586).

granted; usually by the civil authorities,¹ at other times by the classis or the consistory,² occasionally in the country districts by the pastor alone,³ and finally at times by the joint action of church and state.⁴ The license carried with it permission to hang out a card before the door of the schoolroom, naming the subjects in which the master was proficient and for which he had been licensed. In some places, in order to prevent fraud, it was legally required that such cards be hung out, written by the master's own hand.⁵ Such a placard was sometimes called a sample card (*monster kaart*), and frequently contained specimens of handwriting odd to us of these days. Thus, on a schoolmaster's card at Rotterdam was a picture of the whale with Jonah but recently cast forth, and underneath the words:

"As soon as Jonah was cast forth by the whale, he went to Nineveh to preach and to teach.

"Here we teach children the prayers, the questions by heart, and we go out catechizing."⁶

The election and appointment of teachers varied greatly. The more important Latin schools were under the immediate control of the city burgomasters,⁷ and appointment seems to have been made directly by them without reference to the church, except that generally the requirement of creed subscription was enforced.⁸ The elementary schools might be so managed, but on the whole the church authorities had more voice in appointments to lower schools. The synods sought indeed to secure to the consistories the legal right of joint action with the magistracy on all appointments,⁹ but in this they were never entirely successful.

The remuneration of the teachers was partly by stipulated salary, partly by approved school fees, and oftentimes by sundry extras, as entrance (matriculation) fees, stipulated presents, and free lodging. A *Nijkerk* contract of 1619 illustrates all of these. There were two masters, one Dutch and one Latin. Each should receive "a yearly

¹ Holland and W. Friesland, 1581 (*Buddingh, op. cit.*, 12), 1591 (*ibid.*, p. 7), Utrecht, 1586 (*ibid.*, p. 34), 1613 (*ibid.*, p. 40), etc.

² Zeeland, 1583 (*Buddingh, op. cit.*, p. 8).

³ *Acta van part. Syn. van Zuid-Holland*, iii, 479.

⁴ Leicester's school order, 1586 (*Rutgers, op. cit.*, p. 640).

⁵ *Buddingh, op. cit.*, p. 85 (Utrecht city, 1631); *ibid.*, p. 76 (Utrecht country schools, 1654); *Schotel, op. cit.*, p. 76.

⁶ *Schotel, op. cit.*, p. 76.

⁷ *Van Flensburg, op. cit.*, vii, 366 ff; *Enschedé, op. cit.*, i, 166.

⁸ *Brandt, op. cit.*, iii, 321-2; iv, 98, 138, 158.

⁹ Thus in the particular Synod of North Holland in 1604, the question was asked "whether or not it be not desirable, even necessary, that the schoolmasters, as well in the cities as in the villages, should henceforth be named with the consent of the churches." To which the synod made reply: "Yes, by all means, and it were to be desired that this might be consummated. The churches, however, shall in particular use all diligence to secure this consent as far as possible." (*Rietsma, and Van Veen, Acta der provinciale synode gehouden in de Noordelijke Nederlanden*, i, 353.) The Synod of South Holland in 1622 similarly answered: "It is the opinion of the synod that the appointment and dismissal of teachers cannot take place without the advice of the consistory." (*Acta, etc.*, i, 57.)

salary of two hundred gulden to begin with, as well as free lodgings and as much peat as their predecessors had." Besides, were the regular tuition fees: Three stivers a quarter for Dutch reading; five stivers for reading and writing; Latin pupils, six stivers. In addition was a matriculation fee of "two blanken." And in addition to all the foregoing, "as a special encouragement, both schoolmasters shall receive at Christmas two stivers from each child and two stivers on St. John's day in the summer, and nothing more."¹ The salaries of masters came sometimes from the town treasury, and sometimes from church funds which had (apparently) been sequestered from the church orders at the Reformation.² It was common for the school ordinances to regulate the tuition fees. Thus the schoolmaster in the Utrecht country schools (1654) should "receive monthly or weekly from each child a certain sum as much as had been fixed by the scholars with the approval of the magistrates or of a court of justice." The master could enforce his claim by proper appeal. "Poor children who asked for free tuition shall all be taught for nothing." If there were too many the scholars or consistory should arrange a "compensation payable out of the deacons' fund."³

At that period—as well as since—the question as to the sufficiency of the schoolmaster's remuneration was an insistent one. The most common expedient then to bring the teaching income up to a living wage was for the master to engage in various side occupations. Valckoogh mentions a long list of possible occupations, ludicrously compounded of all sorts of odds and ends. "The schoolmaster was allowed to be a notary, a tax collector, a secretary; he might compute the taxes, cut hair, cure wounds, act as glazier (*glazemaken*), make balls (to play with) and coffins, cut stone, stain and varnish chairs, mend shoes, make wooden shoes, prepare all mourning articles, hoe gardens, bind books, knit nets, keep a few cows, fatten oxen, earn a stiver by sewing, carve wood, write books, compose love letters—but—before school time."⁴ We probably can gather from this a fairly accurate idea of the various occupations that were followed in connection with schoolkeeping. Certain activities, however, were specifically forbidden. The Classis of Nijmegen forbade its schoolmasters to keep inns or tap houses, either to farm or collect the excise, and even to write legal papers in public tap houses. If the schoolmaster lived in the church steeple, he might not keep a retail store.⁵ In Holland there was found a combination of offices after-

¹ Beernink, *Het onderwijs te Nijkerk* (Bijdragen en Mededeelingen der Vereeniging "Gelre," deel X, 113 ff.).

² Enschedé, *op. cit.*, i, 166; Beernink, *op. cit.*, p. 116; *Acta der part. Syn. van Zuid-Holland*, i, 310; *ibid.*, iii, 417.

³ Buddingh, *op. cit.*, p. 74. The scholars here mentioned were practically a school board composed, jointly of members of the magistracy and of the consistory. *Ibid.*, p. 75.

⁴ Douma, *op. cit.*, p. 75.

⁵ Kist and Royaard, *op. cit.*, iv, 31.

wards usual in America, those of voorlezer, voorsanger, and sexton.¹ These were commonly combined to make up the office of parish schoolmaster. Valckoogh's list is rather of the side occupations of private masters.

The masters needed supervising in various ways. Some sought to turn over a part of their work to incompetent assistants. Accordingly the Zeeland regulations of 1583 specify that the masters "shall be required themselves to hear and examine and correct all the lessons and the compositions of the children; and not by an assistant master, nor one child by another; unless the assistant masters have been found capable by the aforesaid classis; or the pupils by way of preparation recite their lessons to each other in order to learn, or that having recited them to the master they repeat them to the assistant master or to the other children in order to retain them the better."² In this connection, Valckoogh speaks as if the younger pupils regularly recited to the older ones.³ There is some indication of a system of quasi apprenticeship in connection with assistant teachers.⁴ In the larger Latin schools there are of course a number of subordinate teachers. The duties of the subordinate teachers (lectores) in the St. Jerome school at Utrecht were set out in most precise schedules.⁵

The records abound in references to school mistresses. These had to be licensed in the same manner as the men.⁶ They had likewise to sign the confession of faith.⁷ Schotel in discussing these schooldames says that they taught in great numbers in the slums, and that frequently they were unable to write, having to sign the confession with the cross mark.⁸ No evidence has been found that the schooldames kept other than private schools.

The school calendar is not easily settled. Speaking generally, the schools were supposed to continue the year round. No one of the general school regulations studied even refers to a vacation. The University of West Friesland in 1601 had six vacations, aggregating nearly three months,⁹ but there is no good reason to conclude from this as to the practice of the lower schools. The weekly holidays varied. Valckoogh considered a half holiday on Thursday as sufficient.¹⁰ In 1640 St. Jerome, at Utrecht, changed from three half holidays to two, Monday after 2 o'clock and Thursday after-

¹ Douma, *op. cit.*, pp. 91-92.

² Buddingh, *op. cit.*, p. 10. A similar regulation was found at Leiden in 1658. *Ibid.*, p. 145.

³ Douma, *op. cit.*, p. 69.

⁴ *Ibid.*, pp. 85-6.

⁵ Van Flensburg, *op. cit.*, vii 372-376 (1640), 382-385 (1643-1665).

⁶ Leicester's School order 1586 (Rutgers, *op. cit.*, p. 640); Utrecht, 1613 (Buddingh, *op. cit.*, p. 40).

⁷ Brandt, *op. cit.*, iv., 158.

⁸ *Op. cit.*, p. 86.

⁹ Eight days in the beginning of May, four weeks "kers vacantie," two weeks at Easter, two weeks at Pinkster (Whitsuntide), six weeks in summer, and eight days at "kermis vacantie" in October. W. B. S. Boeles, *Frieslands Hoogeschool*, etc., i, 351.

¹⁰ Douma, *op. cit.*, p. 71.

noon.¹ The Utrecht country school regulations (1654) say two weekly half holidays on such days as the scholars may determine and no attention to be paid to Shrove Tuesday or kermises.² The usual custom, however, seems to have been half holidays on Wednesdays and Saturdays.³ The church holidays, which may be supposed to have been also school holidays, were Christmas, Easter, and Pinkster, "with the day following each," and sometimes "the day of the circumcision (New Year's day) and of the Christ's ascension."⁴ To these may be added, as school holidays, St. Nicholas day (Dec. 6) and generally the kermis.

The school buildings of the period seem on the whole not to have received much attention. In the cities, as with us, special buildings were set aside for the public schools; elsewhere the schools were generally held in the dwellings of the masters, which were near the parish church. Nor was the interior of the schoolroom any more considered. Light and ventilation were all too frequently ignored. In summer the rooms were too often intolerably hot. In winter, peat and candles furnished a scant supply of heat and light.⁵ The room itself (apart from the contents of the master's desk) would seem to us quite bare, accustomed as we are to modern schoolrooms. The furniture consisted of nothing more than a chair and desk for the master, and for the pupils bare benches, sometimes with backs, but quite often without. In the Latin schools might be found also a blackboard and shelves for books. The parish schoolmaster of the villages, who might be notary besides, would need a varied stock of supplies, according to Douma (following Valckoogh): "A good handtplace (paddle for striking the open hand of the naughty pupil), and a strong *roe* (fabricated whip) made of willow branches, a sharp penknife, a sandbox (for blotting), a writing desk which could be locked, containing pens, a seal, green wax, an ink pot, a bundle of goose quills, a glass full of black ink, a blue tile on which to mix ink, small and large bowls for inks of various colors, parchments, three or four books of white paper, an ink horn to hang by his side when he went out, a brass candlestick with two lights, notes from which to teach letter writing, an arithmetic board on which to lay the counters, a rule, a roll book for the names of the pupils, three or four little books, a Bible, a prayer book, a psalm book, a Testament, a reading desk for the Bible, and an oil can or lantern for the clock work."⁶ There is no reason to doubt that much of this description would apply as well to the schoolmaster's outfit in New Netherland.

¹ Van Flensburg, *op. cit.*, vii, 372, 382.

² Buddingh, *op. cit.*, p. 72.

³ Douma, *op. cit.*, p. 86; Beernink, *op. cit.*, 114.

⁴ Eccl. Rec., 4224 (Article 67 of Synod of Dort church order).

⁵ Douma, *op. cit.*, p. 40.

⁶ *Ibid.*, p. 69. The *roe* was more frequently called *roede*. The handtplace likewise often appears as *placke*, *plake*, or *plak*.

Of special interest for our subsequent discussion is the question of the education of girls. Of the general opportunity of the girls to attend the elementary schools there would seem to be no doubt. The Zeeland regulations of 1583 say that: "Furthermore, separate schools shall be kept for boys and girls, when this is feasible. Where this is not feasible, the said boys and daughters shall be separated as much as possible from each other, not only on benches, but also in all places in the schools and out."¹ Douma, following Valckoogh, says of the latter part of the sixteenth century: "The pupils, girls and boys separated from one another, sit on low benches without backs. The girls sit in a corner all by themselves."² Douma further reproduces (p. 70) a picture ascribed by him to the beginning of the seventeenth century, in which the girls are evident by their distinctive dress, sitting furthest from the master. One of the best pictures we have of the interior of a Dutch school is that depicted on the gable stone of the orphan house at Enkhuysen, done in 1616, an excellent reproduction of which is found in Prof. P. L. Muller's *Onze Goude Eeuw* (vol. 2, p. 368). In this the dress of the little girls is as distinctive as any photograph of present-day conditions could show. In the school regulations of Nijkerk in 1627 there were three masters—one Dutch, one Latin, and one for the girls. Each master, it appears, taught separately from the others.³ In the Utrecht rural school regulations (1654), already several times referred to, the eleventh item states that "the boys over ten years of age shall sit separately from the girls, and the oldest shall sit next to the schoolmaster."⁴ Douma quotes (verbatim) a school regulation of the seventeenth century that "Schoolmasters instructing both girls and boys in the same school must have sufficient space so that they may be separated from one another and that they may be taught separately."⁵ Gilderland (1681) has a similar regulation to which it adds: "If boys are taken to board, no girls shall be received with them in the house above nine or ten years of age; and likewise, if girls are taken to board, no boys shall be received with them above twelve or thirteen years old, on pain of six guildens to be paid by the schoolmaster for each child."⁶ While Holland, in common with the rest of the seventeenth century world, excluded girls from all public higher learning, the references given show amply that girls were ad-

¹ Buddingh, *op. cit.*, p. 9.

² *Op. cit.*, p. 69. In Schotel, *op. cit.*, p. 80, we find Mr. Valckoogh's verses:

"De meyskens sullen zitten op een hoek alleen
En de knechtken sullen ook zitten by een."
The girls shall sit in a corner alone
The boys shall also keep together.

³ Beernink, *op. cit.*, p. 116.

⁴ Buddingh, *op. cit.*, p. 71.

⁵ Douma, *op. cit.*, p. 87.

⁶ Buddingh, *op. cit.*, p. 81.

mitted to the elementary schools along with the boys; in separate rooms, if the numbers permitted; if not, in the same room with the boys, though in different parts of the room and in different classes. In respect to the education of girls, Holland conditions were much in advance of those that prevailed even at a much later date in some of the English colonies of America.

In general the regulations for the Dutch schools of that time show at once likenesses and diversities in school management as compared with the present. Both the similarity and the diversity are illustrated in the school hours. These varied from place to place, and were different in winter and summer. Summer hours in some places were 6 to 8 a. m., 9 to 11 a. m., 12 to 2 p. m., 3 to 5 p. m. (Gronengen and Ommelanden).¹ Nijkerk in 1619 had the same fourfold division, only dismissing at 10 and 4.² Utrecht, however, had the hours which were afterwards common in Dutch America, 8 to 11 a. m., 1 to 4 p. m.³ Winter hours varied "according to the circumstances of the time and place," being usually shorter than those for summer. Then, as now, tardiness and absences demanded attention. "On the appointed hour for the assembling of the children," say the Zeeland (1583) regulations, "the aforesaid schoolmaster shall look over the roll to see whether all are present and shall punish suitably those who come too late, and shall ascertain from the parents * * * the cause of the absence of those who are not found present in school."⁴ Manners were not forgotten; as soon as the children, especially the boys, entered the school, they must bow to the master. The boys, however, kept on their hats, except when reciting.⁵ Religious nurture was ever in the foreground. "The schoolmaster shall make his pupils say by turn the morning prayer when they enter the school in the morning; when leaving towards noon, the prayer before dinner; when returning in the afternoon, the prayer after dinner; and again on leaving the evening prayer."⁶ This must have been well-nigh universal. The same thing occurs in nearly every set of regulations found either in Holland or in America.

It was a general requirement that the master hang up in the school-room the rules governing his school. Valckoogh has left in rhyme a long list of such rules, the rhyme and meter of which are unfortunately destroyed by translation:

Those who do not take off their caps before a man of honor,
 Who run and scream and swear,
 Who race wildly or improperly through the streets,
 Who play for money or books, or who tell lies,
 Who chase or throw at people's ducks or animals,
 * * * * *

¹ Douma, *op. cit.*, p. 86.

² Beernink, *op. cit.*, p. 114.

³ Buddingh, *op. cit.*, p. 72.

⁴ *Ibid.*, p. 10.

⁵ Douma, *op. cit.*, p. 70.

⁶ Utrecht (1654) regulations Buddingh, *op. cit.*, p. 70.

Who play with knives or run their hands through their hair,
 Who run into the fields, or jump into the hay with sticks,
 Who stay at home without the teacher's or parent's leave,
 Who make noise in church or who buy candy,
 Who do not say prayer at table, before lessons,
 In the morning or in the evening,
 Who tear their books, or spoil their paper,
 And who call one another names here,
 Who throw their bread to dogs or cats,
 Who wish to keep what they find in school,
 Who spit in the drink of another, or step on his dinner,
 Who run away from school and do not tell it,

* * * * *

Who do not go nicely to church and home again,
 And who read these rules and do not mind them,
 Shall receive two paddlings (placken) or be whipped.¹

An interesting school rule full of "local color" was a requirement that the masters forbid swimming in dangerous places; "and to this end they shall appoint *notators* who will look after their fellow pupils, take note of them, and report such to the schoolmasters."²

The instruments of punishment were mentioned above, the *plak* and the *roede*. The former was a stout wooden paddle with which the teacher struck the pupil's outstretched palm. The latter was a bundle of switches, the use of which belongs to the common educational history of mankind. Even in that day regulation of punishment was necessary. Douma quotes an order of the time: "Discipline or punishment must be neither too easy nor too harsh, but should be moderated according to the character, health, and disposition of the pupil, and after the customary school discipline, only with *plak* and *roede*."³ That contrary emotions were aroused in parents, then as now, is evident from a picture on the title page of a contemporary arithmetic by Jan Belot Dieppois. The scene is a schoolroom. A devil peers from the wall behind the master's desk, a father enters with his little son and says: "Beat him freely and spare neither *plak* nor the *roe*, before I do something else to him." A mother at the same time comes in with her son and says: "I am nearly crazy, I cannot stand it that you should thus beat my good child." Then the teacher groans: "'Unhappy is the man,' says Aristotle, 'who is in charge of the children of several mothers.'"⁴

The curriculum of the elementary school was very simple. The A B C's, spelling, reading, writing, the barest acquaintance with figures, and, later on, a history of Dutch wars—these with the religious instruction made up the whole. The Utrecht instructions for the country schools (1654) seem to give a fair idea of what was taught

¹ Quoted in Schotel, *op. cit.*, p. 78.

² Utrecht (1654) regulations, Buddingh, *op. cit.*, p. 72.

³ *Op. cit.*, p. 90.

⁴ The picture is reproduced in Douma, *op. cit.*, p. 97.

as well as some insight into the methods of teaching: "In teaching, the schoolmaster shall pay special attention that the fundamentals of spelling shall be well laid before the children come to the reading, that they may accustom themselves to read distinctly and learn to distinguish well the syllables and the words, and they shall not make the children proceed too quickly from one book to another; and they shall also teach the youth to understand the numbers of the chapters of the Holy Scriptures and the Psalms." "On a certain day the pupils shall challenge one another to spell the most difficult words." "And that the pupils may be the better stimulated to do their duty, they shall write every week a prize which shall be hung in the school and those who have the most prizes shall sit the whole week at the front." "The school shall be divided into classes, each class shall learn from one kind of book; those who will learn from the same book together shall also be called at the same time and shall recite the same lesson, the others standing near by and following in their book. All those who have been heard, they shall return together quietly to their seats, and another class shall be called."¹ The master "shall hear each pupil (recite) twice and shall show (i. e., instruct) him once before noon, and the same after noon."

The amount of arithmetic included in this curriculum for the country schools of the Province of Utrecht (1654), simply the "numbers of the chapters of the Holy Scriptures and the Psalms," is less than that prescribed in 1612 for the schools of the city and towns of Utrecht. In the latter the schoolmaster was required to teach the pupils "with all diligence in addition to reading, writing and arithmetic (*rekenen*) etc., the Our Father, The Creed, and the Ten Commandments."² Evidently the commercial demands of the cities and towns gave arithmetic a greater importance than it had in the country. That students not destined for the commercial life need not know arithmetic is shown by the fact that in England at this same time boys about ready to leave the Latin grammar school for the university were often barely able to read the numbers of the books they studied.³ The *Nijkerk* (1619) regulations show also that arithmetic was looked upon as a special subject: "Neither of the two masters [Latin or Dutch] shall teach anything during school time but Latin and Dutch. Arithmetic and other subjects must be studied in private lessons."⁴ On the whole, then, arithmetic seems to have occupied about the same place among the Dutch of that day that commercial bookkeeping now has with us. In this connection, it is interesting to note that the course prescribed for the school-

¹ This is one of the earliest known references to class recitation.

² Buddingh, *op. cit.*, p. 38.

³ Brinsley, *Ludus Literarius*, p. 25 f. (London, 1612).

⁴ Beernink, *op. cit.*, p. 115.

masters sent out by the West India Company to New Netherland included "reading, writing, ciphering, and arithmetic."¹

The textbooks used in the better elementary schools are probably pretty well represented by the list officially promulgated at Utrecht in 1650:²

Het groot en kleyn A. B. C. boeck;
 De Heydelberchse Catechismus;
 De Evangelien ende Epistelen;
 De Trap der Jeugt;
 De Historien van David;
 Proverbia Salomonis;
 De spiegel der Jeugt van de Nederlandse oorlogen;
 De sendbrieven van de nieuwe editie met eenige stichtelyke dichten daar achter.

The first three of these are sufficiently indicated by their translated titles: The Great and Small A B C Book, The Heidelberg Catechism, and The Gospels and Epistles. The alphabet books were generally called "cock books," from the picture of a crowing cock found thereon. On the title page of one of these appeared:

We must know the alphabet very well
 Before we can readily read any book.

In addition to the alphabet, these books contained the Lord's Prayer, the commandments, and the prayers.³ The Heidelberg Catechism was the authoritative catechism of the Reformed Dutch Church. The Gospels and the Epistles served as a reading book. "De Trap der Jeugt" means literally "The Stairway of Youth," but the writer has not been able to find any indication of its contents. The Proverbs of Solomon is again a reading book. "De Spiegel der Jeugt," literally "The Mirror of Youth," treated of the wars of the Dutch people.⁴ "De Sendbrieven," etc., are the epistles of the New Testament.

As has been many times said, the teaching of religion was a main function, perhaps *the* main function of the school. Attention has been called to the use of prayers at the opening and close of the forenoon and afternoon session. We have seen also that the ordinary school studies were taught with religious content and material. Besides all of this, specifically religious exercises are stated with precision in most of the contracts. The Utrecht (1654) regulations require the master to teach "the prayer of our Lord Jesus Christ, also the twelve articles of the Christian faith, the Ten Commandments, and afterwards the confession of sin, being the prayer before the sermon; also the questions and answers of the Christian catechism."⁵ In Zeeland (1583) the masters must exercise their pupils "on certain hours daily or weekly, in the singing of the Psalms, to the end that

¹ Eccl. Rec., p. 98.

² Buddingh, *op. cit.*, p. 89.

³ Douma, *op. cit.*, p. 46.

⁴ Buddingh, *op. cit.*, p. 97.

⁵ *Ibid.*, p. 70.

they may help to sing them well in the meeting.”¹ “On Sundays the children shall again come to school at 7 o’clock in the morning, go to church with the schoolmaster at 9 o’clock and listen quietly to the sermon. After dinner at 1 o’clock they shall again go to school in order to learn their lessons; and at 2 o’clock they shall sit in the church under the pulpit and recite their catechism. And the schoolmasters shall be at pains to see that all this takes place orderly and quietly.”²

While the extracts here presented are from three distinct sets of regulations, there is no reason to believe that the combined result is not typical. Almost the same procedure was explicitly or implicitly required in the New Netherland contracts. While there are minor variations at different times and places, we may feel sure that in four essentials there was well-nigh universal agreement; first, the religious subject matter to be memorized, never less than what is indicated above; second, the learning of the Psalms for the Sunday church service (it is to be noted that the parish schoolmaster is generally also the leader of the congregational singing); third, the attendance of the school children upon church service in a body under the direction of the master; and fourth, the public catechizing of the school children. This last in New Netherland was often, if not generally, on one of the week days.

So much attention given to such perfunctory religious exercises would not at the present period receive general approval. But there is one aspect of the question which turned this religious function of the schools to an unexpectedly valuable account. It seems fairly clear that by the religious character of the curriculum the Dutch colonists were led through their zeal for religion to provide schools in connection with their churches; because, without parochial schools, the people did not see how their children could receive what seemed to them to be the absolute essentials of religious teachings. This fact will account for the presence of schools in struggling frontier villages of Holland America, where, without this religious zeal, interest in education alone would not have sufficed to maintain adequate schools.

So far but little has been said about the Latin schools. Quite probably the teaching of Latin was at that time much the same throughout the Protestant world. There were Latin schools in every important town. Many long antedated the Reformation.³ The Synod of Dort (1618–19) petitioned the States-General to “reform” the higher and lower Latin schools. The clause relating to the latter we quote as bearing on our subsequent study. “But as for the trivial or inferior schools the synod likewise most humbly prays your High

¹ Buddingh, *op. cit.*, p. 9.

² School Contract at Rynsburg, 1601. Douma, *op. cit.*, pp. 92–3.

³ That at Amsterdam seems to date certainly as far back as 1342. Buddingh, *op. cit.*, p. 56.

Mightinesses that you would be pleased to order that some general rules for the government of such schools be drawn up and prepared, by and with the advice of such learned men who understand best what relates to the instruction of youth whereby those defects which are so frequently observed in schools may be mended, and as far as possible a uniform method of teaching be established, especially in the principles of grammar, logic, and rhetoric.”¹ The particular synods concerned themselves with the Latin schools mostly, it is true, about subscription to the creed on the part of the masters, but also about matters more interesting to us now. In 1627 the question was raised in the synod of South Holland as to whether the fundamentals of Hebrew should not be taught in the trivial schools (*in scholis trivialibus fundamenta Hæbraicæ linguæ*). The answer was that, while this was desirable, it had better be left to the discretion of those concerned with the schools.² In 1634 “a rector of a trivial school, who is a member of the church and in a certain sense also a servant of the church, asks whether children under pretext of good exercises should be allowed to learn to present a comedy.” It was answered that such was opposed to God’s word and could not be granted.³ The inquiry referred, of course, to the common Renaissance practice of presenting classical plays as school exercises, to which, however, strong opposition had now arisen from moral and other Puritanic considerations. The strong hold which the Latin school had then is partly explained by the fact that Latin was necessary to advancement along any professional or official line. Schotel quotes some verses:

Those who want to become men of importance,
Will be prepared in school.
Notaries, clerks, treasurers, or those who want an office
Must go to school and learn Latin well.⁴

Following Douma (p. 94), we may say that the trivial or Latin schools were found in nearly all cities. These schools were not always higher than ordinary elementary schools, but stood on the same level as the latter. The pupils were often admitted in their eighth year. The school laws of Leeuwarden (1638, renewed 1701) show a school conducted by a rector and four subordinate teachers, all owing obedience “to the honorable magistrates.” No pupils were admitted who did not know how to read. Declensions and conjugations were at first the chief subjects. Then came explanations from Latin and Greek authors. The Heidelberg Catechism was of course not forgotten. The *Vestibulum* of Comenius or the Distichs of Cato were used. The New Testament was translated from the Greek, and Greek composition taught.

¹ 177th session. Brandt, *op. cit.*, iii, 326.

² Acta, i, 220.

³ *Ibid.*, ii, 32.

⁴ *Op. cit.*, p. 101.

That education was, on the whole, widespread throughout the Netherlands is abundantly evident, although definite statements are difficult to make. Woltjer quotes a traveler of the latter part of the sixteenth century, one Guiciardini, who says of Holland: "The common people generally know the fundamentals of grammar, and all the people, even the peasants and the country folk, know at least how to read and write. Besides, they know the art and science of the ordinary languages so generally and so well that one is really surprised. Many people who never left the country speak several foreign languages, especially French, which is spoken by almost everybody. Many speak German, English, Italian, and other foreign tongues."¹ The same author quotes the Englishman, Josiah Childe, as saying in 1665: "The Dutchmen always take good care of the education and instruction of their children, daughters as well as sons * * *. A Dutchman, however inferior in class or station or ability he may be, always takes care that his children learn how to write a good hand and the art of counting; he even wants them to become competent in the arithmetic of commerce."¹

While these statements are too sweeping to be accepted literally, evidently both writers considered that the educational situation among the Dutch was much in advance of what they know more intimately elsewhere; an opinion in which it is easy to concur.

That public schools abounded throughout the Netherlands is equally evident. Every study of the archives of town or province discloses their presence. The minutes of every religious body bear overwhelming testimony not only to the existence of schools but also a zealous interest in their maintenance. It is proper to note that while the sixteenth century church enactments call for the establishment of schools, almost none among the multitudinous school references of the seventeenth century are concerned with this problem. The complaint of the seventeenth century synods is not the lack of schools, but the poor pay of teachers and the consequent inferior service; not the need of Protestant schools, but the presence of Roman Catholic and other heterodox masters; not the establishment of schools, but the proper regulations of schools already in existence.²

¹ Woltjer, *Christelijk Nationaal Schoolonderwijs*, p. 75.

² Two specific references may properly be mentioned in this connection. In 1608 at a regular session of the Classis of Drenthe the Roede church reported that it had no school. However, not only was a reasonable excuse offered for such a delinquency, but the report further stated that a private school had been maintained (Reltsma, *op. cit.*, viii, 91-2). This is a clear instance of the exception that proves the rule. The second reference has been widely used as implying lack of schools in the Netherlands. In fact, it is perhaps the most widely known of all sources bearing on early Dutch schools, being an act of the Synod of Dort (1618-9), seventeenth session: "Schools * * * shall be established not only in cities but also in towns and country places, where heretofore none have existed." (Translation from Dunshee, *op. cit.*, p. 4.) A frequent interpretation of this has been that heretofore no schools have existed in towns and country places; and the words as given appear to authorize, though not to demand, this interpretation. The Latin original, however, decides otherwise: "Scholæ * * * in singulis pagis instituantur, sicubi hactenus nullæ institutæ fuerunt" (*Acta Synodi* * * * Dordrecht, p. 61). So that a truer rendering

The word "public" used just above in connection with these schools was chosen advisedly. Although tuition was regularly charged—contrary to the present American conception—nevertheless the public authorities, partly civil and partly ecclesiastical, provided the school, examined, and licensed the teacher, paid him a salary, and by law regulated what he should teach, what books he should use, and the conditions under which he should in general conduct his school. In many places school supervisors (*scholarchen, opsienders*), corresponding in part to our school board and in part to school inspectors, were provided by civil enactment to exercise general supervision of school affairs.¹ In at least one instance (Leiden, 1652) an officer, much like a modern expert supervisor, was provided at public expense to see, among other things, that the masters and dames "treated the children well."² In these many respects did seventeenth century Holland approximate the public school system of to-day.

The elementary school of the Netherlands was thus a public parochial school, admitting girls and boys alike, teaching them two of the three R's, less often the third, but never omitting the catechism. The master, while serving the school, generally served also the church by taking a stated part in its regular Sunday service. The control of the school devolved upon both ecclesiastical and secular authorities. It was this school which was reproduced almost identically in the Dutch villages of Holland America.

of the doubtful clause would be, "if anywhere heretofore none have been established." The contemporaneous Dutch rendering of the original Latin is to the same effect: "Soe erghens voor desen geene en zih opgerecht gheweest" (*Acta ofte Handelinghen * * * Synodi * * * tot Dordrecht*, p. 55). Mr. Van Laer translates this, "if (in case) in any of these places (literally 'anywhere') heretofore none have been established." (Letter to the writer, March 6, 1911). The proper interpretation, then, of the act of the synod puts the presumption on the other side. Schools were so general that even the exceptional lack had to be expressed contingently.

¹ Buddingh, *op. cit.*, p. 75; Rutgers, *op. cit.*, p. 641; Van Flensburg, *op. cit.*, vii, 382, etc.

² Buddingh, *op. cit.*, pp. 143-4.

CHAPTER III.

THE DATE OF THE FIRST SCHOOL IN NEW NETHERLAND.¹

"In the year 1633 the first school was established by the Dutch at New Amsterdam,²" Statements to this effect have found their way into print many times in the past 60 years; and the fact thus asserted has been accepted as a fact established by practically all writers on the history of education. But some information recently made accessible seems to point to a later date as being the more probable.

The Ecclesiastical Records of the State of New York³ give, for the first time in accessible English form, certain records of the Reformed Dutch Church in Holland that throw considerable light on the educational history of the Dutch in New Netherland and colonial New York.

In a way, which will be more exactly shown in Chapter V, the conduct of the public schools in New Netherland was partially under the control of the Classis of Amsterdam, which was that division of the Reformed Dutch Church of the Netherlands exercising ecclesiastical control over New Netherland throughout most of the Dutch period (and over the Reformed Dutch churches in New York till 1772). In the records of this classis we find the following among the "Regulations relating to the East India and West India affairs, etc., devised by the deputies of the classis appointed therefor April 7, 1636:⁴"

VI. Of the Schoolmasters:

In case any schoolmasters shall be sent to any of these foreign fields, the same course shall be pursued with them * * * as with the siecken-troosters * * *

II. Of the siecken-troosters (comforters of the sick):

1. The siecken-troosters must present themselves, as far as practicable, before the classis. The classis must endeavor to have a good supply of these on hand, and shall decide which out of all of them shall first be recommended by the deputies to the companies.
2. The examination of the siecken-troosters shall be conducted by the brethren deputies, who shall bring in a report thereof at the next classis.⁵

From the "Instructions and letter of credentials for schoolmasters going to the East or West Indies or elsewhere," adopted June 7, 1636,

¹ A portion of this chapter has previously appeared in the *Educational Review*, and is here reproduced by permission.

² Dexter, *History of education in the United States* (1904), p. 12.

³ 6v, Albany, 1901-6.

⁴ Eccl. Rec., p. 89.

⁵ *Ibid.*, p. 91.

⁶ *Ibid.*, p. 89.

the following extract is quoted to show more fully the method of examination and appointment:

Inasmuch as has offered his services, in this capacity, to the committee on ecclesiastical affairs of the said company, and which committee is especially charged therewith by the Classis of Amsterdam: and the said classis having previously inquired as to this individual, and by examination have ascertained his fitness and experience for such a position; that on the report rendered by the said classis, and with the approbation and consent of the said honorable directors, he has been appointed schoolmaster and sent in such capacity to N..... N..... with these specific instructions.¹

In accordance with the foregoing regulations, we find the following:

Acts of the deputies,
Adam Rolands

1639, July 18.

Adam Rolands, having requested to go to New Netherland as schoolmaster, reader (voorlezer), and precentor (voorsanger), was accepted, as recommended, upon his good testimonials and the trial of his gifts, on August 4, 1637; and was sent thither.²

The date 1639 need not concern us here, but the other date, August 4, 1637, is crucial to our discussion. The Adam Rolands thus examined and licensed on August 4, 1637, bears the same name³ as the "first schoolmaster" whose teaching career in New Amsterdam is generally supposed to have begun in 1633. But in the document just quoted, he is licensed for that position in 1637. If this certificate were the only evidence bearing upon the date of his entrance into the position in question, no one would hesitate to say that a date earlier than August 4, 1637, should not be assigned. But inasmuch as educational historians, such as Mr. Dexter, say⁴ that it is "certain that in 1633" Roelantsen was sent from Holland to be master of the school, we must therefore examine closely before we accept the date indicated by this newly found reference.

So far as appears, it was Mr. Dunshee⁵ who first gave explicit statement to the since current opinion, and in these words:

1633—In the spring of 1633, Wouter Van Twiller arrived at Manhattan as the second director general of the New Netherlands. In the enumeration of the company's officials of the same year, Everardus Bogardus is mentioned as officiating as minister at Fort Amsterdam, and ADAM ROELANTSEN as the *first* schoolmaster.⁶ (This has as substantiating footnote, Albany records,⁷ i, 52).

In an extended list of the officers and servants of the Dutch West India Company, in 1638, Rev. Everardus Bogardus is again mentioned as minister at Fort Amsterdam where Adam Roelantsen was still the schoolmaster.⁸ (This has as substantiating footnote Albany records, ii, 13-15).

¹ Eccl. Rec., p. 98.

² *Ibid.*, p. 122, where one finds August 4, 1673. Mr. Van Dyke of the Sage Library writes me, however, that "The original transcript says 1637."

³ The name appears variously as Roelants, Roelantsen, Rolands, Roelandson; he himself used the first two of these forms.

⁴ *Op. cit.*, p. 15.

⁵ History of the school of the Reformed Dutch Church in the City of New York (1853).

⁶ *Ibid.*, p. 28-9.

⁷ Van der Kemp's MSS. translation of New York Col. MSS. (Dutch) in the State Library.

⁸ Dunshee, pp. 29-30. The edition of 1883 gives the same words for these two quotations except that in the first one in place of "In the spring of 1633," we have "In April (prior to the 12th), 1633;" and a reference footnote for "12th" is given to O'Callaghan's History of New Netherland, i, 141-3.

We would naturally understand these quotations to mean (1) that in some original document, presumably Albany Records, i, 52, is to be found an enumeration, perhaps formally drawn, of the company's officials for the year 1633, with "Adam Roelantsen, schoolmaster," thereon; (2) a similar list for 1638 in Albany Records, ii, 13-15, likewise containing "Adam Roelantsen, schoolmaster."

Now, the fact is that in no extant document is there to be found any such list, or anything like it, either for 1633 or for 1638. Such lists have been compiled—the first ones by O'Callaghan¹ from widely separate sources. As an illustration of one such source, and also that the reader may see for himself the contents of Albany Records, i, 52, that reference is here given in its entirety, excepting only the epithets applied to Grietje and her unprintable response thereto:

This day, date underwritten, before me, Cornelis van Tienhoven, Secretary of New Netherland, appeared Adam Roelantsen, schoolmaster, aged about 32 years, at the request of Domine Bogarde, and hath by true Christian words, in place and with promise of a solemn oath if needs be, declared, testified and attested it to be true and truthful that in the year 1633, Grietje Reyniers, being with the deponent at the Strand, near the late warehouse for cargoes, he heard the sailors of the ship The Soutberg, then lying in the roadstead, cry out to Grietje aforesaid,!! whereupon she, saying All which deponent declares to be true, and that this is done by him without simulation and without any regard of persons.

Done on the Island of Manhate this 13th 8ber 1638.

Adam Roelants.²

It is clear from this paper that "Adam Roelants" was "schoolmaster" on the "Island of Manhate," October 13, 1638, and also that he was on Manhattan in 1633.³ The further bearing of this declaration we postpone for the moment, while we consider more fully the lists to which Mr. Dunshee refers. It will be observed that the Albany Records, i, 52, which Mr. Dunshee gives as his reference to substantiate his 1633 statement, bear no resemblance to a list of officials. The other references, Albany Records, ii, 13-15, are equally far from resembling a list and go no further toward establishing Adam Roelantsen's connection with the school than to show by the records of a certain case in court that he was in Fort Amsterdam, June 10, 1638.

Before we ask how Mr. Dunshee came to make such statements, it may be well to say a word about Mr. O'Callaghan and Mr. Brodhead. These men were incomparably the best students in Mr. Dunshee's day of the period in question. Shortly before Mr. Dunshee wrote, each published a history covering this period;⁴ each issued a second edition shortly after Mr. Dunshee wrote; while both are quoted in Mr. Dunshee's work. Neither of these historians in either edition refers to such an original list as one would infer from Mr. Dunshee to be still extant. On the contrary, Mr. O'Callaghan took the pains to compile

¹ O'Callaghan's History of New Netherland, vol. 1, pp. 142, 180-1.

² The translation here given is O'Callaghan's (i, 55), which is better than Van der Kemp's.

³ The "Strand" is here in Manhattan, and not in Holland.

⁴ O'Callaghan, *op. cit.*, 1st edition 1845, 2d edition, 1855; Brodhead, History of the State of New York, 1st edition (v. i) 1853, 2d edition (do.) 1859.

such lists. The one for Kieft's administration (1638-1647) includes 28 names with 21 distinct references in substantiation.¹ It may further be said that the only references that these historians give as to Adam Roelantsen at the time in question are to the declaration regarding Grietje Reyniers and to the case in court above referred to.

Considering that Mr. Dunshee was not primarily an historian, what is more natural than that he should avail himself of these two excellent works which had but recently been issued when he wrote? This, we find, is just what he did. In a footnote Mr. Dunshee says² that the contents of his first chapter were "culled from * * * Brodhead's New York, and here as elsewhere throughout the work his language has at times been appropriated;" while in Chapter II (in which our question is discussed) occur 19 footnote references to O'Callaghan.

In order to exhibit the probable indebtedness of Mr. Dunshee to these two historians in the construction of his paragraphs quoted above, and thus to show that O'Callaghan is Mr. Dunshee's actual authority for his assertion about the lists of company's officials, we show herewith, in one column, Mr. Dunshee's statement's, and in a parallel column what seems their probable source in Brodhead and O'Callaghan:

[Brodhead and O'Callaghan.]

"1633 * * * Director general of New Netherland was Wouter van Twiller * * * van Twiller arrived at Manhattan early in the spring."³

[In O'Callaghan we find for 1633 a compiled list of sixteen] "officers in the service of the company" [concluding with] "at Fort Amsterdam, at which place the Rev. Evaradus Bogardus officiated as a minister of the gospel," * * *

"Adam Roelandsen, 'schoolmaster,' arrived * * * about the same time,"⁴ * * * "first schoolmaster in New Amsterdam * * *."⁵

"Among the other officers and servants of the company [in 1638], we find mention made of * * * [here follow twenty-six names, after which this sentence:] The Rev. Evarardus Bogardus continued to officiate as clergyman at Fort Amsterdam where Adam Roelantsen was schoolmaster."⁷

[Dunshee.]

1633.—In the spring of 1633, Wouter van Twiller arrived at Manhattan, as the second director general of New Netherlands. In the enumeration of the company's officials of the same year, Everardus Bogardus is mentioned as officiating at Fort Amsterdam, and *Adam Roelandsen* as the *first* schoolmaster.⁸

In an extended list of officers and servants of the Dutch West India Company, in 1638, Rev. Everardus Bogardus is again mentioned as minister at Fort Amsterdam, where Adam Roelantsen was *still the* schoolmaster.⁹

¹ *Op. cit.*, I, 181.

² *Op. cit.*, p. 17.

³ Brodhead, *op. cit.*, I, 222-3.

⁴ O'Callaghan, *op. cit.*, I, 142.

⁵ *Ibid.*, p. 143.

⁶ *Ibid.*, p. 141 (chapter heading).

⁷ *Ibid.*, p. 181.

⁸ Dunshee, *op. cit.* (1st ed.), p. 28-9.

Ibid., p. 29-30. Italics not in original.

The reader will note how helpful for Mr. Dunshee's purpose are the words "still the," introduced by him into the last sentence taken from O'Callaghan.

Each one will judge for himself how successful has been this tracing of the genesis of Mr. Dunshee's words. But whatever may be the verdict on that point, the fact remains that there are no such original official lists known, and that every particle of known evidence, connecting or tending to connect Adam Roelantsen with the school on Manhattan (except certain documents that establish the fact of his presence on Manhattan from June, 1638), is included in the declaration quoted and in the record of his certification at Amsterdam given above.¹

Before the certification record was known, it was an easy, if not very compelling inference, that Roelantsen, who was schoolmaster in 1638, had held that position from the time of his coming, which was generally agreed to have been in 1633. Valentine,² who wrote much on Dutch affairs, frankly restricts our knowledge of the beginning of Roelantsen's career to what can be gained, directly and by inference, from the declaration above quoted. And Pratt,³ in the *Annals of Public Education in New York*, can give no further evidence. But the writers on educational history have preferred to follow Dunshee, possibly feeling that there was no escape from such explicit references to original official lists.

With this preliminary discussion over, let us now take up our evidence, the certificate record of August 4, 1637, and the declaration of October 13, 1638, and see what is contained explicitly or implicitly in them:

1. Adam Roelantsen had come to Manhattan as early as 1633: for what purpose and with what business we do not know.

2. At some time after the 1633 episode and before August 4, 1637, he returned to Holland.⁴

3. On August 4, 1637, "Rolands" was examined by the committee of the classis and duly authorized to teach for the West India Company in New Netherland.

4. At some time after August 4, 1637, and before June 10, 1638 (using the law court records above referred to), he left Holland, arrived in Manhattan, and began his teaching career.

Postponing the consideration of some other points frequently mentioned in this connection, let us now endeavor to fix more exactly the date of Roelantsen's arrival at Fort Amsterdam.

¹ Mr. A. J. F. van Laer, the present archivist of the New York State Library, agrees with the writer that "There are no original lists of officers and servants of the West India Co. for 1633 and 1638 in existence," and expressly justifies him in using the sentence above to which this footnote is given.

² Corporation manual, 1863, p. 559

³ *Loc. cit.*, p. 4.

⁴ Trips to Holland were common enough; Roelantsen seems to have taken two such trips in after years (1646 and 1650).

Besides the court record of June 10, 1638, and the declaration of October 13, 1638, we have another record giving an agreement to which Adam Roelantsen was a party and bearing the date of January 27, 1638. The year 1638 of this date must be rejected in favor of 1639 for the following reasons. The record of this agreement is in an original and bound volume containing the register of the provincial secretary from the beginning of Kieft's administration (March, 1638), where it appears between instruments of December, 1638, and February, 1639. Moreover, the nature of the subject matter of this agreement under discussion is such as must follow the lawsuit of June 10, 1638; which date is in its turn similarly determined by conditions like those urged above. With this instrument put into its proper place of January 27, 1639, we are ready to consider a certain probable line of evidence as to the more exact date of Roelantsen's second appearance in New Netherland.

When we recall that the number of vessels sailing between Holland and Fort Amsterdam during these years was small, and that the records, beginning with Kieft's administration, are fairly continuous, we are authorized to ask when Roelantsen could probably have reached Fort Amsterdam after his certification on August 4, 1637. Mr. van Laer, in the letter already referred to, says that Roelantsen "sailed probably either in den *Harink* (*Herring*) with Kieft, or else in den *Dolphins* (*Dolphin*); both these vessels sailed from the Texel in September, 1637, and arrived at New Amsterdam in the spring of 1638." Mr. van Laer elsewhere¹ gives the date on which the *Harink* arrived as March 28, 1638,² and in the letter quoted says "presumably the vessels kept together all the way over." We thus seem authorized to fix the most probable date when Adam Roelantsen opened his school in New Amsterdam at a time slightly after March 28, 1638.

Certain other interesting suggestions have been advanced by various writers as to the beginning of schools on Manhattan. Some have thought it probable that either Bastiaen Jansz. Krol or Jan Huygen, comforters of the sick in 1626, taught a parish school prior to Roelantsen's coming; others that the 1637 certification of Roelantsen was merely the conforming, on his part, to some newly made ecclesiastical machinery, and that therefore we are free to suppose that he had then been teaching on Manhattan since 1633; and still others, not able to give name and date, nevertheless say that an elementary school in New Netherland prior to 1638 is so inherently probable that we must believe that such a school was established, even though we can not point to the specific documentary proof therefor.

Did Bastiaen Jansz. Krol teach school in connection with his duties as *kranken-besoecker*? Of course, properly speaking, it is obligatory

¹ Van Rensselaer-Bowler MSS., p. 816.

² See also O'Callaghan, *op. cit.*, I, 180.

on those who suggest Krol's name in connection with the schoolroom to adduce some evidence in support of such a suggestion. So far no specific evidence has been brought forward; but there has been a frequent tendency to fall back upon some supposed custom and ask whether the comforters of the sick did not customarily teach school, and whether the mere presence on Manhattan of a *kranken-besoecker*—no other schoolmaster being at hand—does not warrant the presumption that the *kranken-besoecker* did conduct a parish school. It has, indeed, sometimes been stated that the instructions of *kranken-besoecker* actually included the duty of holding school. On the last point, however, the evidence is directly contradictory. In the Ecclesiastical Records (pp. 96–97) is found a "letter of instructions for *siecken-troosters* (another name for *kranken-besoecker*) going to the East or West Indies, etc.," drawn up in 1636 by the Classis of Amsterdam, which gives in accessible form the duties of the *kranken-besoecker*. Even a casual reading of this will show that no school-keeping was contemplated in these instructions. But more important to our point is the fact that the identical instructions given to Bastiaen Jansz. Krol himself by the consistory of Amsterdam, December 7, 1623, are now available. Before we present them to the reader, however, it may be proper to say a word about such instructions, and the connection of the Amsterdam consistory with them. Dr. A. Eekhof has published (1910) a sketch of the life and work of Bastiaen Jansz. Krol in which he gives such source selections from the minutes of the consistory of Amsterdam as show the work of the consistory in sending out ministers, *kranken-besoeckers*, and schoolmasters. The selections show in detail what we have already known in general, that in the first part of the seventeenth century it was the consistory of Amsterdam that exercised immediate ecclesiastical control over the East and West India church affairs. Later the Classis of Amsterdam assumed and directed this work. Among the data presented in Dr. Eekhof's book is an abstract of the "Copie-Boek" of the consistory from 1589 to 1635, in which is included, among other things, a list of the instructions given to the several men sent out under the auspices of the consistory. To give the reader some idea of the acts of the consistory, we here present in shortened form a portion of one page (viii) of the abstract:

23 Dec. 1610. D. Casparus Conradi Wiltons was sent with instructions as minister to the East Indies.

23 Dec. 1610. Willem Van Langenhaven was sent with instructions as schoolmaster to the East Indies.

31 March, 1611. Gillie Hendriexsz was sent as schoolmaster to the East Indies.

[Undated.] A letter about certain disputed questions.

8 Dec. 1611. Copy of instructions for Josia Bacx as *zieckentrooster* to the East Indies. The same for Abraham Van Loo (with power to baptize).

8 Dec. 1611. Copy of instructions for Lubbert Claissz as schoolmaster to the East Indies.

3 July, 1612. Copy of instructions for Meynart Assueri as kranken-besoecker to Guinea with authority to baptize.

It is evident from this abstract that the instructions not only differentiated the general activities of minister, kranken-besoecker, and schoolmaster from each other, but even went into closer details, such as to say, for instance, whether the kranken-besoecker was also authorized to baptize. Under these circumstances we feel warranted in concluding that the presumption is against Krol's keeping school, unless he were specifically authorized so to do. That the reader may judge for himself whether Krol's instructions included school-keeping, we present herewith a translation of them as they appear in Dr. Eekhof's book:

7 Dec. 1623. Copy of instructions for Pieter Bonnissen, who will journey to the East Indies as a kranken-besoecker. An instruction of the same content has been handed to Bastiaen Jansz. Krol. It reads, word for word, as follows:

As it has been found needful and edifying that on board the ships sailing to the West Indies there be appointed persons who may read from God's holy word and from books of the reformed ministry something good for the edification [of the people], who may privately exhort the people to salvation, may instruct in their illness those who fall sick on shipboard, and may comfort them. So by the consistory of this city, who are charged thereto by the classis, with the consent and approbation of the noble lords, directors of the West India Company, is the bearer of these presents, named Pieter Bonnissen, appointed as kranken-besoecker to the end aforesaid. And that the same therefore may be recognized by everyone, and that he may know how he shall have to behave himself in this service, these credentials are given him in the letter of instruction. The points according to which he shall have to regulate himself in this service are the following:

First, he shall every morning and evening, also before and after dinner, make the customary prayers.

Second, he shall, when needed and required, zealously instruct and comfort all sick.

Third, he shall privately admonish with God's word all who desire such admonition or who may need it.

Fourth, he shall at the appointed times read from God's word or from the books of the reformed ministry some chapters or a sermon.

All of which things the aforesaid Pieter Bonnisz. shall fulfil diligently and in the most edifying manner, and he shall discharge these duties in a Christian and God-fearing manner, so that he may edify the people both by word and manner without assuming to himself anything else that belongs to the preaching office under any pretext whatsoever. Thus done in the meeting of the consistory at Amsterdam; in witness thereof the seal is affixed and this subscribed by us the 7th December, 1623, in the name and by the authority of all:

Rudolphus Petri, Praeses.
 Jacobus Triglandius, Scriba.
 D. van den Emden, Elder.¹

¹ Eekhof, *op. cit.*, pp. x, xl.

And with the same instructions was Bastiaen Jansz. sent to the West Indies, 7 December, 1623. As Bastiaen Jansen has fallen sick, so is Gerryt Pieterz sent in his place. With these same instructions did Bastiaen Jansz., after recovered health, journey to the West Indies, the 25th of January, 1624.¹

It is evident that school-keeping was not included in Krol's instructions; and from what we have already seen, it is a fair conclusion that if he had been expected to keep school he would have been so instructed. To complete the discussion we may include two or three other references. In 1634 Krol was examined before a notary at Amsterdam. The first question and answer in this examination are pertinent here.

In what capacity and for how long was he in the service of the West India Company in New Netherland?

He states that he set out as comforter of the sick and made a voyage and stay of 7½ months in that country. He went out for the second time in the same capacity, and after he had been away about 15 months, he was appointed to the directorship at Fort Orange [Albany] on the North River, and held the same for three years. The third time he went out again to the best of his recollection, served again for about two years. After which he was elected director general of New Netherland at Fort Amsterdam on the Island of Manhates * * * and served in this office 13 months.²

Clearly then there could be no school-keeping by Krol on Manhattan unless during the "stay of 7½ months" in 1624,³ and the 15 months in 1625-6.⁴ But we can hardly suppose that there was much need of a school on Manhattan at either time. The first serious attempt at colonization in New Netherland (1623) had brought about 30 families from Holland and scattered them over a wide area; 18 families were sent to Fort Orange (Albany), some settled Wallabout, others were stationed at the South River, "two families and six men" went to the Connecticut River, and eight men were left at Manhattan.⁵ Evidently there was no school during the "stay of 7½ months" (1624). In 1625 "six entire families" and other settlers were sent, but it was not until after Krol had been sent to Fort Orange that Fort Amsterdam was built and the 18 families were brought down from Fort Orange to Manhattan. So that it seems impossible that Krol could have done any teaching during his second stay on Manhattan. Taking into joint consideration the presumption that Krol would not teach since he was not so authorized, and the fact that there could not have been any demand for teaching on Manhattan during his service as *kranken-besoecker*, we seem authorized to dismiss as too baseless for serious consideration any thought of Krol's serving as schoolmaster.

¹ Eekhof, *op. cit.*, p. xli.

² Van Rensselaer-Bowler MSS., p. 302; cf. Eekhof, *op. cit.*, p. xxvi.

³ Eekhof, *op. cit.*, p. xxiii.

⁴ *Ibid.*, p. 35 ff.

⁵ Brodhead, *op. cit.*, i, 150 ff.

As for Jan Huygen, we read as follows in the same consistory minutes:

2 April, 1626. Jan Huygen having been an elder in Cleve, and by the same [certain before-mentioned men] examined and judged capable, shall also be recommended and proposed to sail to the West Indies as a *siecken-trooster*.¹

No detailed instructions are given, but we are authorized to suppose that the customary instructions held in this case, and these, as we have seen, contained no reference to school-keeping. Beyond this, little is known of Huygen. He and Krol are mentioned together in 1626 as "comforters of the sick, who, whilst waiting a clergyman, read to the commonalty there on Sundays from texts of the Scripture, with notes and comment."²

D^r. Michaelius, in his well-known letter (11 Aug., 1628), refers to "the storekeeper of the company, Jan Huygen," in such connection as to make it practically certain that the *kranken-besoecker* had by that time become "the storekeeper of the company." It would seem improbable, therefore, both from the contrary presumption, as with Krol, and from this direct evidence of another occupation, that Huygen taught school during his service as *siecken-trooster* on Manhattan.

But may it not be that Adam Roelantsen really began to teach on Manhattan in 1633 and only went for certification to Holland in 1637, because of the new regulations promulgated the preceding year? To this plausible-sounding question a sufficient answer would seem to be that, presumptively, no man teaches first and is certificated afterwards, and that accordingly those who wish to claim that Roelantsen taught before he was certificated should present some positive evidence to that effect. Moreover, the mere presence in New Netherland of Roelantsen in 1633 is far from being a positive indication that he had charge of the school. A more convincing answer, however, to the question is found in the records of the consistory of Amsterdam. We have seen enough from the "Copie-Boek" of this consistory to show that there existed in Amsterdam prior to 1636 a competently authorized body to examine and send forth ministers, *kranken-besoeckers*, and schoolmasters. We have seen further that this body did send to New Netherland two *kranken-besoeckers* and one minister,³ and, still further, that it kept a list of the men authorized by it to fill these various positions. If, then, Roelantsen or any one else taught school in New Netherland in an official capacity during the period under consideration, we ought to find a record of it either in the minutes of the consistory or in those of the *classis*. In the case of the consistory, Dr. Eekhof's book furnishes us a list cover-

¹ Eekhof, *op. cit.*, p. xxiii.

² Jameson, *Narratives of New Netherland*, p. 83. Cf. Eekhof, p. 34.

³ D^r. Michaelius; see *Eccl. Rec.*, pp. 54, 66; Eekhof, *op. cit.*, p. xxiv.

ing the period from 1589 to 1635, while the Ecclesiastical Records give the American data of the classis from 1632. But no reference is made in either to any schoolmaster for New Netherland prior to the certification of Roelantsen in 1637. We seem thus authorized to say with some considerable degree of certainty that there was no official schoolmaster in New Netherland prior to the date already assigned in the first part of this chapter for the beginning of Adam Roelantsen's term of service.

But, after all, is not the existence of a school in New Netherland prior to 1638 so inherently probable as to force us to believe that existence, even though no specific data can be adduced to show its actual presence? While this question is in a way more vague than either of the preceding two, there is much to commend it. In favor of the suggestion can be urged the general interest of the Dutch in education, shown, for example, by the schoolmasters we saw above sent to the East Indies in 1611. Moreover, the clause in the charter of freedoms and exemptions of 1629, while having no legal force on Manhattan, still seems to indicate that the West India Company was interested in schools; and it would seem a peculiar inconsistency for the company to demand of subordinate colony makers more than it was willing to do itself. Furthermore, there were quite possibly at least 50 children about Fort Amsterdam for some years prior to 1638. Finally, a certain contemporaneous document seems to demand the actual presence of a school. A marriage contract drawn up "in New Netherland on the Island of Manhates [sic] and at Fort Amsterdam, the last of April anno 1632," referring to "resel [Rachel] Vienje and Jan Vienje, both minor children" of the bride by a former marriage, states that the contracting parties agree "to clothe and rear the above-named children as children ought to be, to keep them at school, to teach them a trade as good parents ought to do."¹ Now, would these people promise to keep their children at school if there were no schools available? On the other hand, we have to face an absolute absence of evidence as to any particular school or schoolmaster, and further, as we have seen, there are good grounds for concluding that no official schoolmaster was licensed prior to 1637. We might surmise that there was a private school, but this would be mere surmise; there is no evidence for it.

In view of all the facts now known concerning the question of the date of the first school in Netherland we seem forced to make the following conclusions:

1. The earliest known schoolmaster in New Netherland was Adam Roelantsen.

¹ N. Y. Col. MSS., I, 6. The provisions of this marriage contract may, however, have been set down rather as a matter of form, in imitation of the Holland custom.

2. He was licensed to teach August 4, 1637, and began his school in Manhattan probably not earlier than April 1, 1638.

3. It is improbable that there was any official schoolmaster licensed for New Netherland prior to August 4, 1637, and it is accordingly improbable that there was any official school prior to the one opened in 1638.

4. It is improbable that either Basteaen Jansz. Krol or Jan Huygen ever taught in Manhattan.

5. It is impossible either to affirm or deny that there was a private school on Manhattan prior to 1638.

6. The year 1633 has no known or even probable significance in the school history of New Netherland.

CHAPTER IV.

THE MASTERS OF THE OFFICIAL ELEMENTARY SCHOOL OF NEW AMSTERDAM.¹

In spite of the excellent study made by Mr. Dunshee of the public elementary school of New Amsterdam, many points in the history of the school yet remain unsettled. The terms of service of the successive masters, for example, are almost as difficult to fix as was the date of the first school. In fact, when we consider on the one hand the material that has come to light since Mr. Dunshee wrote, and on the other the recklessness of statement found in some of his successors, it is not too much to say that most of the conclusions hitherto reached regarding the history of this school during the Dutch period demand close scrutiny. In particular the reputation of all the schoolmasters of New Amsterdam has suffered through an unwarranted emphasis upon the shortcomings of one. The recent publication of the new material in the Ecclesiastical Records gives opportunity for a reconsideration of the whole subject.

Of Adam Roelantsen's service in the schoolroom next to nothing is known. What salary he received, and from what source it came, can only be surmised from facts to be brought out in connection with his successors. In fact, practically nothing can be said directly of his school keeping. As to his private life more is known. He was married at least twice. His first wife was, at the time of her marriage with Roelantsen, a widow with a daughter. The first reference to Roelantsen recorded in this country (June 10, 1638) is of a suit brought by his stepdaughter's husband, Cors Pietersen, for the balance of her patrimony. The court "decided that fl. 12. 10 stivers are still due to Cors Pietersen and no more."² This lawsuit is the first of many in which Adam figured, not usually to his credit. The following August (19th and 26th) he was engaged in one of the most tangled slander suits that could be imagined. He had, it seemed, stated in some quarrel that "he did not care about the country and the council." This being publicly reported, he brought suit for slander against the reporter, but unsuccessfully. Then he brought suit against three others, apparently for testifying against him. Two

¹ For convenience sake we shall call the company's settlement on Manhattan by its final name of New Amsterdam, although not until 1652 was it officially so denoted.

² N. Y. Col. MSS., iv., 11.

of the defendants in turn brought suit against him. In one of the latter suits he admitted "in the presence of the court that he hath nothing to say against the plttf. and knows and esteems him to be an honest man." In another, the parties were "condemned each to pay 25 stivers to the poor." One of the men slandering him was similarly fined.¹ In another slander suit a little later a certain woman, named in the records "fair Aleeta," and Adam were "ordered to cease slandering one another on pain of being fined."² In a worse case, "after defendant had acknowledged that he knew nothing against the plaintiff's wife, and nevertheless had slandered her, he was condemned to pay fl. 2. 10 to the poor."³

Of all Roelantsen's suits probably that for washing has excited most comment:

On Thursday being the 20th of September (1640), Adam Roelantsen, plaintiff against Gilles de Voocht, defendant, for a bill for washing. Plaintiff demands payment for washing defendant's linen. Defendant says the only objection he offers to the payment for washing is that the year is not yet expired.

Ordered plaintiff to fulfill the contract, and at the expiration of the time to demand payment.⁴

So far as at present appears, the record here given tells all that is known of this matter. There is no evidence in this that the schoolmaster had given up the public school to run a public laundry.

In 1642 Roelantsen engaged—

Ian Teunissen to build a house thirty feet long, eighteen feet wide, with an eight-foot story under the beams, the end cross beams resting on corbels, all hewn square, the house enclosed all around with clapboards, and covered with a good reed roof such as shall be proper, a tight ceiling of clapboards, three square windows, two outer doors, one portal, one pantry, one bedstead, a winding staircase to ascend to the garret; the part of the chimney that projects above (the house) to be of wood and the chimney to be provided with a mantel piece; a passage way three feet wide, with a partition.

Which house aforesaid he, Ian Teunissen, promises to deliver built and properly covered in the aforesaid form on the first of August for the sum of three hundred and fifty carolus guilders, Hollands, payable by Adam Roelantsen one-half when the lumber belonging to the above-mentioned house shall be brought on the ground where the house is to stand; the other half when the house shall be properly completed.⁵

Apparently the house was delivered on time, for we find Roelantsen selling on August 8 what may well have been his old house. This house, "only the building and not the grounds," together with "half the vegetables which are growing at present" in the garden brought him 90 guilders.⁶ A year later (on August 7, 1643), in accordance with the newly adopted rule of the company, he patented what was probably the lot that he had hitherto occupied. The description of

¹ N. Y. Col. MSS., iv, 17-18.

² *Ibid.*, p. 30.

³ *Ibid.*, p. 74.

⁴ *Ibid.*, p. 77.

⁵ *Ibid.*, ii, 7.

⁶ *Ibid.*, ii, 26.

this lot as given in the patent¹ and in a deed of sale² (December 2, 1646) is such as to allow the fixing of the probable site of Roelantsen's home.³ Since the Dutch schoolmaster of those times usually taught in his dwelling, as we shall later discuss, this has been taken to be the site of the earliest known school in Manhattan; and a tablet to mark the site has been placed (1910) on the Produce Exchange on Stone Street by the Schoolmasters' Club of New York.

How long Roelantsen taught in the New Amsterdam school is a question the difficulty of which far exceeds its importance. But as his leaving has been publicly fixed at 1639⁴ upon what seems to be insufficient data, an examination of the evidence becomes necessary. So far as appears, the only basis for the fixing of this 1639 date is a statement in O'Callaghan's History of New Netherland,⁵ that "Adam Roelantsen van Hamelwaerd, previously schoolmaster at New Amsterdam," settled at Rensselaerswyck (Albany) in 1639. The statement is made without substantiating footnotes other than a general prefatory remark that the list was "compiled from the books of monthly wages and other manuscripts." It contains a direct contradiction of the abundantly established fact that Adam Roelantsen was not van (from) Hamelwaerd, but from (van) Dockum.⁶ In no known instance is Roelantsen assigned to any other place than Dockum, which is widely separated from Hamelwaerd. It may be added that the known dates of the presence of Roelantsen in New Amsterdam made any settling in Rensselaerswyck improbable, and render his extended stay there impossible.⁷ The examination of the records to which O'Callaghan had access is of course the final means of deciding the accuracy of the statement in question. Fortunately this examination has been made, and by the masterly hand of Mr. van Laer, who prepared a list of settlers, similar to O'Callaghan's, for the Van Rensselaer-Bowier Manuscripts. In a letter⁸ to the writer he says: "I examined page by page all the account books, court records, and other papers for that period that have been preserved among the Rensselaerswyck Manuscripts, but found no Adam Roelantsen van Hamelwaerd mentioned * * *. I am confident that he (O'Callaghan) made a mistake."

Thus setting aside the 1639 date as unfounded, we ask for a more probable date of the termination of Roelantsen's teaching career.

¹ N. Y. Col. MSS., G G, p. 86.

² *Ibid.*, II, 153.

³ See Innes, J. H., *New Amsterdam and Its People*, p. 63.

⁴ This date appears on a bronze tablet erected in 1883 in the school of the Reformed Dutch Church. See Dunshee, *op. cit.*, p. 279.

⁵ *Loc. cit.*, I, 438.

⁶ For instances see N. Y. Col. MSS., I, 30, 254; II, 7, 93; III, 72; IV, 17.

⁷ The known dates covering this period are Oct. 13, 1638 (N. Y. Col. MSS., I, 50); Jan. 13, 1639 (*ibid.*, IV, 30); Aug. 9, 1640 (*ibid.*, IV, 74); Sept. 20, 1640 (*ibid.*, IV, 77).

⁸ Of date Mar. 3, 1909.

The apparent successor to Roelantsen was Jan Stevensen. In a letter of September 2, 1648, D^r Backerus wrote to the classis: "Master Jan Stevensen, who has served the company here as a faithful schoolmaster and reader for six or seven consecutive years * * * is now leaving for home."¹ Accepting this at its face value, for Stevensen's career is abundantly substantiated, we fix by simple subtraction the beginning of Stevensen's connection with the New Amsterdam school at 1641 or 1642. The spring of 1642 would give six and a half years for Stevensen's term, which fits sufficiently well with the Domine's "six or seven" years. Shall we take it for granted that Roelantsen served until his successor took up his work? Our knowledge of the period is so slight that any conclusion at all seems hazardous, though certain considerations help us. The four years' term of service that the spring of 1642 would give to Roelantsen carries with it some independent probability derived from similar service elsewhere. Annual appointments, on account of the long time of the passage to and from New Netherland, were naturally not satisfactory. The Van Rensselaers generally contracted for three years, sometimes four, and sometimes for six years.² The South River term was fixed for four years,³ and what little we know about the customs of the West India Company in this regard points also to four-year contracts. Thus a schoolmaster in 1646 was appointed by the company to Curaçao for four years;⁴ schoolmaster Vestensz at New Amsterdam was probably appointed for the same term;⁵ D^r Backerus, appointed in 1642, and D^r Selyns, in 1660, each had a contract term of four years.⁶ We may add that no contradiction to the four-year term is seen in Stevensen's "six or seven consecutive years," since the formal request that D^r Backerus and others made for dismissal after the contract time had been fulfilled shows that service was not to stop, *ipso facto*, at the expiration of the term agreed upon.⁷

Accepting then, tentatively, four years as the probable term of service in the company's contracts, we get, by counting forward the full term from the beginning of Roelantsen's work as previously determined, the spring of 1642 as the close of his teaching career. Counting backward six and a half years ("six or seven") from the close of Stevensen's service (September, 1648), we get as the beginning of his career the spring of 1642. That these two dates, fixed by independent lines of reasoning, should coincide, carries with it some force of prob-

¹ Eccl. Rec., p. 237.

² Van Rensselaer-Bowler MSS., pp. 176, 179, 186, 195, 250, 256, 258, 675, 677, 678, 679; Eccl. Rec., p. 309.

³ O'Callaghan, *Laws of New Netherland*, p. 272.

⁴ John Walraven; he was also and primarily *slecken-trooster*, *voorlezer* and *voorsanger*. See Eccl. Rec., pp. 202, 212, 281.

⁵ Eccl. Rec., pp. 271, 325, 331, 333; N. Y. Col. Doc., xiv, 122-123.

⁶ Eccl. Rec., pp. 235, 540.

⁷ *Ibid.*, pp. 223, 226, 235, 239, 333, 335, 336, 337, 540.

ability. It may be added that nothing in the record prevents the acceptance of this date. Roelantsen was apparently in the Province until some years afterwards.¹

Furthermore, the records are sufficiently full to give some weight to an *argumentum e silentio* that the school once begun was not allowed to lapse. This consideration is strengthened by recorded solicitude on account of the absence of schools in the West India Company's colony of Brazil, both before and after the period in question, but with no such solicitude for New Netherland.²

Having now before us, first, the unsatisfactoriness of O'Callaghan's 1639 date as the close of Roelantsen's connection with the New Amsterdam school; second, the proof that Stevensen began his career about the spring of 1642; third, the presumption that the school was kept up continuously; fourth, the apparently continuous presence of Roelantsen in New Amsterdam; and fifth, a reasonable probability that the West India Company's contract term was four years, we conclude after this somewhat lengthy discussion that the probabilities point, perhaps not strongly but still unmistakably, to the spring of 1642 as the close of Roelantsen's service and the beginning of Stevensen's.

As Adam Roelantsen is the first and best known of these schoolmasters, it may be interesting to trace his career after he gave up the school. O'Callaghan states in the Register of New Netherland (p. 31) that Roelantsen was weighmaster in New Amsterdam in 1643. But Mr. Van Laer thinks there is no evidence to support the statement.³ In 1646, while Roelantsen was away in Holland, his wife died, leaving several children. The director and council accordingly appointed "the four nearest neighbors" (among them "Jan Stevensen, schoolmaster") "curators over the children and property" "until the arrival of the father or some news of him."⁴ When Roelantsen came, he was straightway arrested on charges of violating the customs law and for his old failing of slander,⁵ this time uttered in Amsterdam. From both charges he seems to have been cleared, only, however, to be sued immediately for the passage over for himself and his son. But in this the plaintiff was at fault, for the evidence showed "that Skipper Haye had agreed at Amsterdam with Adam Roelantsen that he should be allowed his board and the freight of his chest on condition that he would perform a seaman's work on shipboard." While the chief boatswain himself declared "that the skipper said on board the ship that he did not require any

¹ Dates additional to those already given are June 20, 1641 (N. Y. Col. MSS., iv, 97); July 31, 1641 (*ibid.*, i, 254); Aug. 8, 1641 (*ibid.*, iv, 98); Feb. 7, 1642 (*ibid.*, ii, 7); Aug. 8, 1642 (*ibid.*, ii, 26), etc.

² 1638, N. Y. Col. Doc., i, 106; 1643, Eccl. Rec., p. 170-1; 1646, *ibid.*, p. 195

³ Private letter to the author, Mar. 3, 1909.

⁴ N. Y. Col. MSS., ii, 248.

⁵ *Ibid.*, iv, 264.

board money from Adam's son, because he said the prayers."¹ The pronoun is a bit puzzling, but probably it was the son who "said the prayers."

In December, 1646, Roelantsen was arrested for an attempt "forcibly to violate Harck Sybaltsen's wife in her own house." After hearing the evidence the court decided that such conduct could not "be tolerated or suffered in a country where justice is wont to be maintained," and condemned "the above-named Adam Roelantsen to be taken to the place where justice is usually executed and there to be scourged with rods and then to be banished from the country as an example to others." However, "in consideration that the culprit is burdened with four motherless children and the cold winter is at hand, the honorable director and council have postponed the execution to a more convenient occasion, when the criminal must depart."²

For some reason the sentence was never executed. Perhaps the confusion at the end of Kieft's administration, the quarrel of Kieft with D^e Bogardus, and the change in the administration to Stuyvesant (May 11, 1647) so occupied public attention that Roelantsen was forgotten. Or possibly—to use a new name for an old thing—Roelantsen had a "pull" of some sort with the new director general, for within a very few weeks after Stuyvesant's arrival we find the director and council (June 14) solemnly appointing this justly condemned malefactor to assist as provost in the administration of justice.³

Two months later the new provost's superior officer stationed him at the door of the tavern to keep watch. But the crowd inside proving too inviting, Roelantsen joined them. His superior called out: "What are you doing here? Why do you not watch at the door?" Thereupon Adam answered, there was nothing to watch. Upon which his superior said, 'You are my servant, you must wait at the door;' and at the same time struck said Roelantsen twice with the back of his hand, and cried, 'Throw the blackguard out of doors.' Thereupon the above-named Adam Roelantsen was thrown out of doors."⁴

It is 1653 before anything else exciting is told of Roelantsen. In that year it was charged that Stoffel Elzers "had called Adam Roelantsen, the woodcutter, from his work in the church, outside of the fort and then attacked and beaten him on the public street."⁵ Apparently, however, the court took the view that the report had been exaggerated and released Elzers on his own recognizance. A month later Roelantsen was sued on a bill for some pork. "Defend-

¹ N. Y. Col. MSS., iv, 275.

² *Ibid.*, iv, 277.

³ *Ibid.*, p. 295.

⁴ *Ibid.*, ii, 164.

⁵ Rec. of N. A., i, 54.

ant admits having received the bacon and says he has sold it to Luycas Eldersen, who refuses to pay for it, as bad."¹ The court decided against Roelantsen; thereupon he in turn sued Eldersen and recovered damages.

Thus, as woodcutter and dealer in old meat, ends the career of the first schoolmaster in New Netherland, the worst and, shall we say, therefore the most discussed of all the Dutch masters; the one who has most unjustly been taken as typical of all. It is, moreover, but fair to the Dutch schoolmasters to recall that only the shortcoming of slander is to be charged against Roelantsen during his service as schoolmaster. He had been four years out of the schoolroom when his worst crime was committed.

The beginning of Jan Stevensen's connection with the New Amsterdam school we have already fixed with some probability as in the spring of 1642. A few scattered references to his life in New Netherland are found in the records. On July 2, 1643, "Jan Stevensen, schoolmaster," patented a lot of land "north of Fort Amsterdam."² Later in the same year "Mr. Jan Stevensen" had his son Jan baptized.³ One rather interesting reference shows the source of Stevensen's salary. In 1647 "Jan Stevensen, from Haerlem, schoolmaster here," gave power of attorney to Luycas Smith to collect for him "from the Honorable Directors of the Incorporated West Indian Company in Amsterdam the sum of seven hundred and forty-seven guilders, two stivers, twelve pennies due him Jan Stevensen, by balance and settlement of his account according to the Book of Monthly Wages No. F. folio 34, earned from their honors in New Netherland."⁴ A more definite statement that Stevensen received a salary from the company is contained in a letter from D^r Backerus to the classis (Sept. 2, 1648): "Master Jan Stevensen now leaving for home has been informed by the Directors and Council that he must pay his own fare. If this is so understood in Holland, then the poor man will retain but little of his salary; for the fare for his passage would swallow up most of it. Considering this fact, will not your Reverences please to assist him with the Directors that he may be exempted from this hardship."⁵ While the foregoing tells us only of the fact of a salary from the company, we have other information bearing on the amount probably received. On December 15, 1644, there was presented by a commission of the XIX a "Report and Advice on the Condition of New Netherland—how the decay there can be prevented, etc." This included among much else an "estimate of the expense which the company would have to bear in New Netherland for the following persons to be rationed at their own expense."

¹ Rec. of N. A., I, 62.

² N. Y. Gen. and Bio. Soc. Coll., II, 16.

³ Eccl. Rec., p. 237.

⁴ N. Y. Col. MSS., G G, 70.

⁵ N. Y. Col. MSS., II, 159.

This list comprises 69 persons at a total expense of 20,040 florins. Among other officers are:

1 Director, at fl. 250 per month	fl. 3,000
1 Clergyman, at fl. 120 per month.....	1,440
1 Schoolmaster, precentor, and sexton, at fl. 30.....	360
40 soldiers, at fl. 13 each.....	6,240

“These [69] officers and servants would be sufficient for the business; and carpenters, masons, smiths, and such like ought all to be discharged.”¹ Arranging these salaries in order of size, the schoolmaster, with his 360 florins, stands ninth from the greatest; while the thirty-fifth man (the median) was to get 156 florins. The average of the whole was 290 florins. This showing for the schoolmaster, even ignoring tuition fees, is probably as good as one could reasonably expect.

Apparently this “estimate of expenses” was prepared with the intent of saving as much as possible to the company. We do not know that the estimate was accepted. Quite possibly it was not. In that case Stevensen’s salary would be possibly greater than 360 florins; and some other considerations support this suggestion. In 1646, when the classis was arranging for the company to support a schoolmaster at Curaçao, the directors replied relative to Walraven, the candidate proposed, that “if he wished to journey thither as siecken-trooster and voorlezer and voorsanger in the church, that they would accept him as such. They would then consent also to maintain a school, and would give for this 36 florins per month.”² Of the four offices here named Stevensen filled three and probably all four, besides acting as sexton. Apparently then his salary would be equally great. A later New Amsterdam schoolmaster, Harmanus van Hoboken, was in 1655 given 35 guilders per month and 100 guilders per year board money, or 520 florins all told.³ We thus feel safe in supposing that Stevensen’s salary was somewhere between these extremes—that is, more than fl. 360 and less than fl. 520 a year; and rather probably was the same as Walraven’s, i. e., fl. 432 a year.

In addition to the salary allowed by the company, tuition money was almost certainly paid by the pupils. This we infer from the Holland custom, and from the existence of a scale of tuition charges in the case of one of Stevensen’s successors, Evert Pietersen;⁴ while, in addition, a reference in the case of Schoolmaster Hoboken can hardly be otherwise interpreted.⁵ Further indication is seen in the

¹ N. Y. Col. Doc., I, 149-156.

² Eccl. Rec., p. 201-2.

³ *Ibid.*, p. 336-7. See also Vestensz’s salary, p. 64, and note 4.

⁴ Minutes of the Orphan Masters, II, 115.

⁵ Records of N. A., II, 39.

fact that the above-named siecken-trooster at Curaçao, being prevented from keeping school, regretted the loss of his school fees, although, as we saw, his salary was definite.¹ With tuition fees and a definite salary, Stevensen's income would be better both absolutely and relatively than was stated in the comparison given above.

The close of Stevensen's connection with the school is fixed rather definitely. On August 31, 1648, power of attorney was given to "Jan Stevensen, schoolmaster."² Three days later D^r Backerus wrote a letter (already several times quoted) to the classis in which he refers to "the bearer hereof Master Jan Stevensen." Elsewhere in the letter he says Stevensen is "now leaving for home" and "it will be necessary * * * to send over * * * a good schoolmaster."³ These statements, taken in connection with the assertion of his "six or seven years" continuous service and corroborated by the known references to "Jan Stevensen, schoolmaster," make it certain that Stevensen began to teach about 1642 and taught continuously until about September 2, 1648.

A remark made in 1647 by Stuyvesant about the school has so often been forced to convey an erroneous impression that it seems proper to give not only the remark but also the situation in which it was uttered. Just five months after Stuyvesant arrived,⁴ he presented, in an effort to reform various abuses, certain "propositions to the members in council assembled," among which was the remark in point:

Fifthly. Whereas, for want of a proper place, no school has been kept for three months, by which the youth here run wild, it is asked where school can be kept, in order that the youth may be kept from the street and be accustomed to discipline.⁵

This has been interpreted by one to mean that "public education was entirely suspended;" and by another that schools were not "very much in evidence." Although the school in New Amsterdam did ordinarily run 12 months in the year, a cessation of 3 months hardly warrants the judgments passed above. But so prone are some writers of history to exaggeration by spectacular emphasis that we may expect again and again to see Stuyvesant's solicitude for proper schools taken as proof of Dutch indifference to education.

The question of the schoolhouse here introduced may properly be considered a little further. In answer to Stuyvesant it was "decreed by the council, as the point particularly interests commonalty, to propose it to the nine Tribunes, so that the best means may be employed at the smallest expense to the inhabitants." Accordingly, Stuyvesant a few days later addressed a communication "to the

¹ Eccl. Rec., p. 202, 280.

² N. Y. Col. MSS., III, 7.

³ Eccl. Rec., p. 236.

⁴ Brodhead, *op. cit.*, I, 433.

⁵ N. Y. Col. MSS., IV, 349.

nine elected Tribunes," suggesting that they take steps regarding the fort, the church, and—

Third, not less important than the preceding matter is the erection of a new school and a schoolmaster's dwelling, for the convenience of the community and the proper education of children. We are willing to contribute privately and for the company a reasonable sum thereto and to help support this laudable work constantly; meanwhile, we shall in the near future give orders to provide a suitable place during the winter, either in the kitchen (combuys) of the Fiscale (prosecuting officer), which seems the most suitable place to me, or else some other place inspected by the church wardens.¹

Whether the church wardens arranged a better place than the Fiscale's kitchen, we do not know; but since the nine men did nothing, we may easily suppose that Stevensen did use a kitchen as his schoolroom for a short period toward the close of his career.

We note here a reference to the apparently universal Dutch custom of having one house for a school and the schoolmaster's dwelling. If we had no other knowledge than this document, we might not certainly conclude from the words here given that one house was intended; but other evidence on the point is ample. The word "new" used here in connection with this school might naturally be interpreted to imply that there had previously existed a building owned and set apart by the company as a school building. While the point is not without its difficulty, such an interpretation would probably not be justified.

Between the leaving of Stevensen, September 2, 1648, and the arrival of Willem Vestensz in the spring of 1650² there intervened a period of a year and a half which has been a good deal discussed in connection with the Dutch schools. The Great Remonstrance, signed July 28, 1649, treating of how New Netherland should be "relieved," said, among other things:

There should be a public school, provided with at least two good masters, so that first of all in so wild a country, where there are so many loose people, the youth may be well taught and brought up, not only in reading and writing, but also in the knowledge and fear of the Lord. As it is now, the school is kept very irregularly, one and another keeping it according to his pleasure and as long as he thinks proper.³

This remonstrance was especially directed against Stuyvesant's administration, and in it was brought forward everything derogatory of Stuyvesant and indicative of decay in New Netherland that the wit of the remonstrants could devise. We, therefore, scrutinize most closely its accusations, but we accept as understatement any admissions favorable to Stuyvesant that may be found therein. When, keeping this in mind, we consider that the complete suspension of the public school for any appreciable length of time

¹ N. Y. Col. MSS., iv, 351 (Mr. Van Lear's translation).

² Narratives of New Netherland, p. 353.

³ N. Y. Col. Doc., xlv, 123.

would have been a stronger indictment than the mere assertion of frequent change of teachers, we feel authorized to conclude that the school was not allowed to go long without some sort of teacher. That, however, the arrangement was not satisfactory to Stuyvesant any more than to the remonstrants is evident from his writing to the classis in August of 1649 that "we need a pious and diligent schoolmaster and precentor. A year has now passed since we were deprived of such help."¹

If this statement of Stuyvesant's had come from the remonstrants, and the words quoted above from the remonstrants had come from Stuyvesant, satisfactory harmonizing might have been impossible. But as the two statements stand, with the known motives of the writers, we must conclude that Stuyvesant did not mean to deny what the remonstrants clearly admit, namely, that some sort of school had been kept up practically the whole time, though with frequent change from one unsatisfactory teacher to another. The words "such help" give the key to Stuyvesant's meaning. There had been teachers, but they had not been "pious and diligent."

As said above, the Remonstrance was directed against Stuyvesant. Accordingly, in anticipation of its promulgation, Secretary Van Tienhoven was sent to Holland to defend the administration. In an extended reply occur these words, following a reference to the schoolhouse not as yet built:

Meanwhile, there is the place designated for a school, where school is kept by Jan Cornelissen. The other schoolmasters keep school in hired houses; so that the youth, considering the circumstances of the country, are not in want of schools.²

That Cornelissen, here referred to, was simply another of the temporary teachers we may accept without question. This reference to him is absolutely all that is known about him. There were then several Jan Cornelissens, just as there are now many John Smiths; but identification, in the one case as in the other, is difficult. One Jan Cornelissen was a bad man, and some have said that this was the schoolmaster. But, so far as appears, such imputations are purely gratuitous. Of other temporary teachers, we know nothing, unless Pieter van der Linde was one. As to this possibility, two pieces of evidence may be brought forward. In the Acts of the Deputies of about 1639, we learn that Pieter van der Linde asked to go as siecken-trooster to the West Indies. Having been heard, he was advised to exercise himself still further in reading and singing.³ Apparently he was discouraged by this answer and came to New Netherland in a different capacity. That he was well esteemed is

¹ Eccl. Rec., p. 263.

² Narrative of New Netherland, 362. The translation here given is Mr. Van Leer's amending of Prof. Jameson's.

³ Eccl. Rec., p. 122.

evident from the second reference, a council minute, which explains itself:

1648, October 26. At the meeting it was considered very necessary that another suitable person should be appointed [precentor] in place of Jan Stevensen. It was learned that, for the present, no more suitable person could be found on the Island of Manhattan to perform the duties of Reader, etc., than Pieter van der Linde. They have, therefore, appointed the said Pieter van der Linde at an annual salary of one hundred and fifty guilders, until another qualified person should be sent out from Holland.¹

The question whether the voorlezer and voorsanger was always also the schoolmaster must be answered in the negative.² But so usually were they all one and the same person that on this point alone we might be led to put Van der Linde among the list of schoolmasters. The difference, however, between the pay offered him and the usual schoolmaster's salary is so great as to leave the matter in grave doubt.

The schoolhouse of this period has been much discussed on account of a passage in the Remonstrance and Tienhoven's reply thereto.

Says the Great Remonstrance:

The bowl has been going around a long time for the purpose of erecting a common school and it has been built with words, but as yet the first stone is not laid. Some materials only are provided. The money, nevertheless, given for the purpose has already found its way out and is mostly spent, or may even fall short, and for this purpose also no fund invested in real estate has ever been built up.³

To this Tienhoven replies:

Although the new school towards which the commonalty had contributed something, is not yet built, the Director has no management of the money, but the Church Wardens have, and the Director is busy in providing material.⁴

It appears from this that building the schoolhouse was not the company's function, but the commonalty's. This agrees with the action of the council already seen, in referring the building of the school to the tribunes of the people. Also, as there, we see that it is the church wardens who must look after such matters. They had charge of the temporalities of the church, including the schoolhouse (see pp. 76, 194).

In conclusion of this 1648-1650 period, it can only be said that there were several who served temporarily as schoolmaster, and among them was a Jan Cornelissen. Pieter van der Linde was possibly another. There was as yet no schoolhouse built. It seems, however, quite probable that the school was kept going continuously.

Willem Vestensz, of Haerlem, was secured after prolonged effort⁵ to take charge of the New Amsterdam School. He left Holland about April 20, 1650,⁶ so that he may be supposed to have begun teaching in the early summer of that year. He was reported as being "an

¹ Eccl. Rec., p. 242.

² For discussion of the point, see p. 120.

³ Narratives of N. Netherland, p. 327.

⁴ *Ibid.*, p. 362.

⁵ For the details of the search see p. 73 ff.

⁶ N. Y. Col. Doc., xiv, 122-3.

excellent God-fearing man;"¹ while the Lords Directors expressed the hope "that he may confirm the good character which he has borne here, and continue for a long time in the edification of the youths."² He was comforter of the sick, voorsanger, and sexton, as well as schoolmaster.³ That he was voorlezer also may be taken as certain, although this office happens not to be mentioned specifically.

On the question of his salary as sexton there was some misunderstanding. Apparently Stuyvesant understood that a single salary was given for all of his various offices put together. Vestensz evidently felt otherwise, for he petitioned both in New Amsterdam and in Holland, both during and after his time of service, both in person and through the classis and the minister that he might receive "compensation for his office as sexton."⁴ We have no evidence, however, that he gained his point. He also complained of slow payments,⁵ and besides asked for "an increase of salary on account of his burdensome family."⁶ The classis feeling pity for him wrote the minister at New Amsterdam to intercede. The reply of D^r Megapolensis (1655, March 18) indicates that Vestensz had not met the early expectations:

As to William Vestiens, who has been schoolmaster and sexton here, I could neither do much nor say much in his favor to the Council, because for some years past they were not satisfied or pleased with services. Thereupon when he asked for an increase of salary last year he received the answer that if the service did not suit him he might ask for his discharge. Only lately I have been before the Council on his account, and spoken about it, in consequence of your letter, but they told me that he had fulfilled his duties only so-so (taliter-qualiter) and that he did little enough for his salary.⁷

In discussing Roelantsen's term of service, the opinion was expressed that probably Vestensz had had a four-year contract and that explicit permission was necessary to give up an office even after the contract had expired. We have direct evidence on both points. That permission to resign was necessary is clear, since on January 26, 1655, Vestensz asked of the council that "he might be favored with his dismissal, as he had completed his service."⁸ His request, however, was not granted till March 23, when we find it stated he had "earnestly and repeatedly sought permission to return to the Fatherland."⁹ As to the four-year's term of service, the evidence unfortunately is neither abundant nor specific. That there was some specifically stipulated term of service is evident from the statement that "he had completed his service." Every such specific term of service anywhere in New Netherland, so far as noted, was for an integral and not for a fractional number of years. Was, then, Vestensz's term for

¹ Eccl. Rec., p. 265.

² N. Y. Col. Doc., xiv, 123.

³ Eccl. Rec., pp. 265, 306, 333.

⁴ *Ibid.*, pp. 306, 325, 331, 335, 338.

⁵ *Ibid.*, p. 325.

⁶ *Ibid.*, p. 334.

⁷ *Ibid.*, p. 335.

⁸ Council Minutes. See Dunshee, *op. cit.*, p. 22.

⁹ *Ibid.*, p. 23.

three, for four, or for five years? It could not have been for as many as five years, since his service which began after April, 1650, had been completed by January of 1655.¹ As between three and four years, we can only say that there is not the slightest hint that points to three years, while several references fit well with four years. At the end of four-years' service Vestensz wrote to the classis asking to be transferred,² and requested of the director general and council an increase of salary,³ and wrote also to the classis for its help with regard to this request. Thus with a definitely specified term of service, of almost certainly an integral number of years, with proof that this could not be as much as five years in length, with no hint in rather full records that it ended at three years, we feel warranted in accepting the pointings of the references quoted, and in fixing accordingly the contract term of Vestensz as probably one of four years.

The salary received by Vestensz was 35 guilders per month for 12 months, together with 100 guilders per year board money.⁴ It was during his term of service that New Amsterdam became a city and promised, when the excise was turned over to it, that it would support "one of the ministers, one precentor, being at the same time a schoolmaster, one dogwhipper." The burgomasters and schepens did not keep the promise so made, and there resulted a prolonged quarrel with Stuyvesant.⁵ During the controversy the classis received a letter from Vestensz "in which he complained of slow payment."⁶

It only remains to conclude that while Vestensz was probably a "God-fearing man," he was not very capable as a schoolmaster. We saw above that he "fulfilled his duties only so-so (*taliter-qualiter*) and that he did little enough for his salary." That Vestensz in asking for his discharge did not wish to change his work, but his location, appears from the record that "William Vestensz returning home from New Netherland * * * asks that he may be sent in the same capacity to the East Indies."⁷ Six months later he obtained his request.

The date of the severance of Vestensz's connection with the New Amsterdam school and the entrance of his successor is shown in the following council minute:

1655, March 23. Whereas, William Vestiens, Chorister and Schoolmaster of this city, has earnestly and repeatedly sought permission to return to the Fatherland, his

¹ No service that the writer has examined commenced before the voyage out had begun; most began after the arrival in New Netherland. See Eccl. Rec., pp. 144, 309; Van Rensselaer-Bowler MSS., pp. 176, 186, 195, 250, 256, 258, 675, 678; O'Callaghan, *Laws of New Netherland*, p. 272.

² Eccl. Rec., pp. 325, 331.

³ *Ibid.*, pp. 334, 335.

⁴ These figures are obtained from certain loose sheets of Dutch MSS. found in the New York Public Library (Moore-Sales collection, no. 1791, item 1223, p. 206). The history of these sheets is not known. They appear to have been torn from a MS. book, and have every appearance of being genuine productions of the period under consideration. Mr. Van Laer thinks they possibly belonged to Director Bontemantel.

⁵ For details of the controversy, see pp. 86 ff.

⁶ Eccl. Rec., p. 325.

⁷ *Ibid.*, pp. 338, 351.

request is hereby granted. Therefore the Honorable gentlemen of the High Council, with the consent of the Rev. Consistory of this city, have appointed Harmanus Van Hoboken as Chorister and Schoolmaster of this city at thirty-five guilders per month, and one hundred guilders extra per year for expenses. He promises to conduct himself diligently and faithfully according to the instructions given, or which may be given him hereafter.

Nicasius De Sille.

Done in Amsterdam, in New Netherland, March 23, 1655.¹

Of Van Hoboken thus elected as master, we know little prior to the date named. That he had been in New Netherland for at least a short period previously is evident from the record February 12 (1655) of the baptism of his child Emmetje in New Amsterdam Reformed Dutch Church.²

It is to be noted that the director and council, on the civil side, and the consistory, on the ecclesiastical, are sufficient to place him in his position without apparent reference to Amsterdam, and that both Hoboken and his predecessor are officially styled "voorsanger (chorister) and schoolmaster of this city." As we saw above, New Amsterdam had already been granted municipal powers. The school accordingly became officially the city school, and as such, should have been, according to Holland custom, under the control of the burgomasters and schepens, subject to certain advice from the consistory. But Stuyvesant was loath to yield his former prerogatives to the city and accordingly his council and not the city officials effected the change of masters. The salary stated here so definitely was not paid at the first with regularity. On August 11 following, Hoboken sets forth that "he is burdened with a wife and four small children, without possessing any means for their sustenance," and so asks "that his salary may be paid to him monthly, or at least quarterly. He is told that "he may depend on the punctual payment of his salary." The next February he made request for further financial assistance, but with what success we do not know. In November, 1656, he asked the burgomasters and schepens for the "hall and the side room" of the Stad Huys "for the use of the school and as a dwelling, inasmuch as he, the petitioner, does not know how to manage for the proper accomodation of the children during winter, for they much require a place adapted for fire and to be warmed, for which their present tenement is wholly unfit." In reply he is told that "the hall and little room whereof the petitioner now requests for a school and a dwelling are not at present in repair, and are moreover needed for other purposes," but he is allowed to rent a certain house "for which one hundred guilders be paid him yearly on a/c of the city."³

This is the first unassailable testimony in our records to the union of schoolhouse and dwelling. In connection we have the third dis-

¹ Dunshee, *op. cit.*, p. 23.

² Records of N. A., II, 219-220.

³ N. Y. Gen. and Bio. Soc. Coll., II, 38.

tinct reference to the obligation of the people, and not the company, to furnish the schoolhouse. In this case the church masters are not mentioned. We are dealing now with a city school, to which burgo-masters and schepens must attend.

Three years later Hobocken requests "an allowance from the city as he is behindhand with the building of the school, and for divers other reasons set forth in the petition." Evidently by this time there has arisen dissatisfaction, for the reply was "Petitioner is allowed to receive his current year's salary * * * and his allowance is henceforth abolished."¹ The dissatisfaction expressed against Hobocken did not take final effect until more than a year hence, but the men of the opposition were evidently determined. On looking about, they found one, Evert Pietersen, an efficient schoolmaster at the South River (New Castle, Del.), whose time was soon to expire and whose salary was likely to be reduced.² Whether in fact they sought Pietersen or he them, we can hardly say, but both sides evidently agreed on the proposition to have Pietersen succeed Hobocken. Before Hobocken's year was out, we find Pietersen, apparently through Stuyvesant, petitioning the Lords Directors for the place;³ while the burgomasters requested that he be appointed⁴ and Stuyvesant recommended it.⁵ On December 14, 1660, the Lords Directors wrote Stuyvesant: "We will consider the petition of Mr. Evert Pietersen * * * and inquire here about his character, conduct, and abilities." On May 2, 1661, they sent Pietersen's commission commanding "all persons without distinction to acknowledge the aforesaid Evert Pietersen siecken-trooster, voorlezer, voorsanger, and schoolmaster in New Amsterdam in New Netherland, and not to molest or disturb or ridicule him in any of these offices."⁶

Whatever dissatisfaction may have been felt with Hobocken's teaching, there was none as to his moral character, for we are specifically told that he was "a person of irreproachable life and conduct."⁶ That he continued in the New Amsterdam school until Pietersen actually assumed the work need not be doubted. In fact we are told explicitly (October 27, 1661) that "Harmanus Hobocken, before schoolmaster and chorister, was removed because another was sent to replace him."⁷ And just when this transfer took place we can fix with some exactness. On October 27, 1661, Hobocken, who "was removed because another was sent to replace him," was "employed on the bouwery of the director general as schoolmaster." This would lead us to accept some date slightly before October 27 as the time of formal transfer of the school from Hobocken to Pietersen.

¹ Records of N. A., vii, 244.

² See p. 129; N. Y. Col. Doc., ii, 169.

³ Pratt, *op cit.*, p. 18.

⁴ Minutes of the Orphan Masters, ii, 97.

⁵ *Ibid.*; Pratt, *op cit.*, pp. 18, 19.

⁶ Council Minutes, Pratt, *op cit.*, p. 17.

⁷ *Ibid.*, p. 17.

The matter seems settled by the sixth item of Pietersen's instructions, drafted November 4:

He shall be allowed to demand and receive from everybody who makes arrangement to come to his school and comes before the first half of the quarter preceding the first of December next the school dues for the quarter, but nothing from those who come after the first half of the quarter.¹

From this regulation it appears that December 1 was the middle of the current quarter. Counting backward we arrive at a date about the middle of October as the beginning of Pietersen's service.

The salary granted by the Lords Directors to Evert Pietersen was "g. 36 per month and g. 125 annually for his board."² The city evidently was bound to furnish him a house, as we see from the minutes of the burgomasters, August 1, 1661:

Master Evert Pietersen is sent here as schoolmaster, precentor, and comforter of the sick by the directors of the company, and he absolutely requires a proper dwelling and schoolhouse, which the director general requests the burgomasters to consider, giving an answer to-day.³

The question of return passage to Holland, which troubled Stevensen, was settled favorably for Pietersen, as we see from his statement (Oct. 11, 1664) after the English occupation, and his salary had been "thirty-six florins per month, one hundred and twenty-five florins for board, Holland currency, free house for school and residence, and free passage to *patria*."⁴ We note here incidentally again that school and residence were one house, and that his salary remained unchanged throughout his term of service under Dutch control.⁵

For Evert Pietersen alone, of New Amsterdam masters, have we a copy of the instructions which were given by the authorities, probably in all cases. As these have not heretofore been published in any educational discussion, we present them here entire:

Instructions and Rules for Schoolmaster Evert Pietersen, drawn up by the Burgomasters of this city with advice of the Director General and Council.

1. He shall take good care, that the children, coming to his school, do so at the usual hour, namely at eight in the morning and one in the afternoon.

2. He must keep good discipline among his pupils.

¹ See p. 68.

² Letter of Lords Directors, May 9, 1661 (Pratt, *op. cit.*, p. 19).

³ Minutes of the Orphan Masters, II, 97. We may add that the burgomasters resolved to "ask for the lot behind the house of the fiscal to build a schoolhouse" (*ibid.*, pp. 97, 103), but apparently nothing came of the request.

⁴ Records of N. A., v, 137.

⁵ This statement needs perhaps some modification. The two quotations given here in connection show Pietersen's salary at the beginning and end of his service under the company. Since the two sums are identical, it seems an easy inference that the salary remained unchanged throughout the period, but the Dutch manuscripts in the New York Public Library (Moore-Sales collection, No. 1791, item 1221, p. 516) give for apparently this same period a salary to the *voorzitter* at New Amsterdam of 35 guilders a month with 200 guilders board money, or 620 guilders a year (cf. Van Rensselaer's History of the City of New York, I, 431-2). If these figures be accepted as representing Pietersen's salary, we must conclude that it was at one time advanced and subsequently reduced to the original figure.

3. He shall teach the children and pupils the Christian Prayers, commandments, baptism, Lord's supper, and the questions with answers of the catechism, which are taught here every Sunday afternoon in the church.

4. Before school closes he shall let the pupils sing some verses and a psalm.

5. Besides his yearly salary he shall be allowed to demand and receive from every pupil quarterly as follows: For each child, whom he teaches the a b c, spelling and reading, 30 st.; for teaching to read and write, 50 st.; for teaching to read, write and cipher, 60 st.; from those who come in the evening and between times pro rata a fair sum. The poor and needy, who ask to be taught for God's sake he shall teach for nothing.

6. He shall be allowed to demand and receive from everybody, who makes arrangements to come to his school and comes before the first half of the quarter preceding the first of December next, the school dues for the quarter, but nothing from those, who come after the first half of the quarter.

7. He shall not take from anybody, more than is herein stated. Thus done and decided by the Burgomasters of the City of Amsterdam in N. N., November 4, 1661.¹

The tuition charges, it is to be noted, are expected of all except "the poor and needy," whom upon proper request he should "teach for nothing." How much income this tuition brought to the master can not be estimated very satisfactorily, since we have no specific knowledge of the attendance, and we do not know whether the tuition was in coin or in wampum, which latter had declined at this time to about one-half the value of the coin. If we estimate 40 pupils paying the three rates of tuition in numbers of, say, 20, 14, and 6 pupils, respectively, we should have a sum of 352 guilders. If this be in coin, the addition to the salary is quite considerable; if in wampum, it is still not inconsiderable.

With regard to the schoolhouse, we can be practically certain that no house was built by the city for the schoolmaster, although this had been contemplated as we saw, when Pietersen entered upon his work. The succeeding February the burgomasters in a petition to Stuyvesant state that it is their intention to "erect and to have built a suitable school [house]" "for the convenience of the inhabitants of this city." They therefore asked to be given a lot, this time on Brouwer [now Stone] Street," in width 30 feet along the street and in length one-half of the depth." The director general and council, however, "for various reasons" considered it "more convenient that the school [house] be erected on a part of the present graveyard."² We hear nothing further of the schoolhouse until after the English occupation, when (May 8, 1666) we read that "Casper Steynmets entering demands payment of a year's rent of his house, hired to the city as a city school."³ We shall later see (Chap. IX) that the first English occupation (1664-1673) effected little change in the school. We thus seem authorized, in the absence of other testimony, to suppose that the "free house for the school and residence," to which

¹ Minutes of the Orphan Masters, II, 115-6.

² Council Minutes, Feb. 2, 1662 (N. Y. Col. MSS., Vol. X, pt. 1, pp. 39-40).

³ Rec. of N. A., VI, 4.

Pietersen referred in 1664 as a part of his salary, was hired by the city for him, in accordance with the custom begun for Hoboken in 1656 and continued (apparently) until after 1669.

Of Pietersen's character during the period under consideration we have little direct evidence. In our first acquaintance with him (1657) he is said by the classis to be "a worthy man."¹ We saw above that the Lords Directors promised Stuyvesant to inquire about Pietersen's "character, conduct, and abilities." In the commission they speak of "the good report which we have received about the person of Evert Pietersen," and refer to his "abilities and experiences in the aforesaid services," as well as to his "pious character and virtues." Other than this we have no testimony, explicit in words, as to his good character. But his long service through a stormy period extending to about 1686, and the evident tender regard felt for him in his old age by the church,² testify more abundantly to his character than could mere words.

That Evert Pietersen served in the city school continuously from his election to the end of the Dutch period (and for years afterwards) we need not doubt, although we have few records of him during that period. On October 11, 1664, a month after the English occupation, "Mr. Evert Pietersen, Schoolmaster of this city, represents, as his allowance from the Company is struck off, that Burgomasters and Schepens shall be pleased to continue him at the same allowance."³ Since the city records for the period under consideration are continuous, we may accept these references to the beginning and ending of his career as satisfactory proof of continuous service from about October 17, 1661, to September 9, 1664, when the English entered the city, and New Amsterdam became New York.

We have so far treated the school as if it necessarily had only one teacher. The Holland custom allowed second masters, and one would think that the size of New Amsterdam would have necessitated either several schools or several masters. There were, to be sure, private schools. But were there not assistant masters in the official school? Two references seem to suggest that there were. When, in 1653, Stuyvesant agreed to turn over the excise to the city, it was on condition that the city "support the two preachers, the schoolmasters, and secretary."⁴ The plural "schoolmasters" must be taken to mean something; but what could it mean better than that there were at least two masters in the official school? Again, in 1664, Stuyvesant passed a law requiring the public catechizing of the children on Wednesdays, in which these words occur: [We have deemed it necessary] "to recommend the present schoolmasters, and to command them, so as it is done by this, that they on Wednesday, before the beginning of the sermon, with the children entrusted to their care,

¹ Eccl. Rec., p. 378.

² See p. 147.

³ Rec. of N. A., v, 137.

⁴ *Ibid.*, i, 128.

shall appear in the church, to examine, after the close of the sermon, each of them, his own scholars."¹ While this may contemplate all the schoolmasters in the city, both public and private, still the phraseology, taken in connection with the foregoing reference, may very well refer to several masters in the public school. Possibly, then, there were two or more masters in the New Amsterdam school from 1653 to the coming of the English.²

We have now traced the history of the elementary school in New Amsterdam from about April, 1638, to the English occupation (1664). No reason has appeared to assert a break in its continuous activity longer than the three months, in 1647. It may be well to tabulate the successive schoolmasters with the probable term of service of each. The dates that we have fixed upon are some of them definite and certain, while others are only probable, one or two indeed are hardly more than conjectures.

ELEMENTARY SCHOOLMASTERS IN NEW AMSTERDAM.

ADAM ROELANTSEN from about April 1, 1638, to about April, 1642.

JAN STEVENSEN from about April, 1642, to September, 1648.

Several temporary teachers, including **JAN CORNELISSEN**, and possibly **PETER VAN DER LINDE**, from about September, 1648, to about June, 1650.

WILLEM VESTENSZ from about June, 1650, to March 23, 1655.

HARMANUS VAN HOBOKEN from March 23, 1655, to about October 17, 1661.

EVERT PIETERSEN from about October 17, 1661, to September 9, 1664 (and afterwards).

Of these, Adam Roelantsen is of known immoral character. The others, with the sole exception of Cornelissen (of whom we know nothing), seem to have met all the moral and religious requirements of a position almost as ecclesiastical as it was academic. These schoolmasters taught in their dwellings. Their pay varied, apparently increasing during the period to a maximum with Evert Pietersen.

¹ Dunshee, *op. cit.*, p. 30. The translation has been amended. The demand in the Great Remonstrance (1649) for two masters (see p. 60) at a time when New Amsterdam was small would accord very well with two or more masters at a later date, when the town was larger.

² The first reference might conceivably refer to Jan de la Montagne, whom we shall discuss in Chapter VI. The second has been interpreted to refer to Pietersen and Hoboken. But to expect Hoboken's pupils to come in a body from the Bouwery two miles and a half distant, is too much. The Latin master, Luyck, is out of the question, since the opening words of the act refer to the elementary curriculum. There is some reason for surmising that Jan Tibout, subsequently master at Flatbush (see p. 167), was Pietersen's assistant. See N. Y. Gen. and Bio. Soc. Coll., II, 70.

CHAPTER V.

THE SUPPORT AND CONTROL OF THE OFFICIAL ELEMENTARY SCHOOL OF NEW AMSTERDAM.

It is already sufficiently evident that the civic and ecclesiastical authorities had common interests in the Dutch schools. We have seen in a general way the working of both sets of authorities. The purpose of the present chapter is to trace in detail the respective share of each in the support and control of the official elementary school at New Amsterdam.

The authorities of the Reformed Dutch Church, from national synod down to local consistory, deemed the management of schools a proper question for their consideration. We have seen in Chapter II something of the action of the synods, as well as of secular authorities, which bear on the question at hand. The enactments there quoted agree in giving to classis or consistory the licensing of teachers, at least so far as to ascertain whether they possessed the necessary religious qualifications. These pronouncements likewise agree in placing upon the civil authorities the actual financial support of the schools. In the main, we may suppose that the ecclesiastical authority was greater in the parochial schools, though the acceptance of the proper confession of faith was, as we saw, expressly required of the Latin masters as well.

It is principally the Holland parochial system which we find in New Netherland, with both church and state appearing in a modified form. Especially does this hold in the case of the company's school on Manhattan (later the city school of New Amsterdam). Civic authority lay in the trading company, whose headquarters were in Amsterdam. The church, in New Amsterdam, the second factor in school control, was what we should now call a mission field; and this too looked to Amsterdam for its control.

In the early part of the seventeenth century, as we saw in Chapter III, the consistory of Amsterdam exercised ecclesiastical supervision over the religious servants of the East and West India Companies. This took place by the express approval of the Classis of Amsterdam. But by 1629 the classis had assumed more direct charge of these matters, and in that year was perfected a more definite understanding between the classis and the trading companies. The classis that year

reported the "Church Regulations, etc.," to the Synod of North Holland, stating "that the directors of both the East and West India Companies gave perfect satisfaction to the members in this particular."¹

In 1636 the classis appointed, apparently for the first time, its standing committee, "the Deputies," or *Deputati ad Res Indicas*. In accordance with their specific instructions, this committee reported (May 5, 1636) "regulations relating to East India and West India affairs, etc.," of which the second and sixth items, already given in Chapter III, refer to the examination of siecken-troosters and schoolmasters. Letters of instruction were likewise adopted by the classis for "candidates (ministers), comforters of the sick, and schoolmasters going to the Indies"; the letter for the last named we give in full, as follows:

June 7, 1636.

↳ *Instructions and Letter of Credential for Schoolmasters going to the East Indies or elsewhere.*

Whereas it is well understood by the Honorable Directors of the N. N. Company, that nothing is more important for the well-being of men, of whatever station, than that they should be taken care of from the very beginning, by keeping them under the eye and supervision of the schoolmaster, and in the exercises of the school, that they derive from such instruction the means necessary for their support, in all the stations and callings of life: and

Inasmuch as, also, upon these exercises, both the glory of God and the salvation of men are not a little dependent; and such exercises are deemed expedient both for the welfare of their company, as well as for the individuals employed therein; and also that their ships, besides the other officers, may also be provided with schoolmasters; and

Inasmuch as the * * * by these, by the name of N. N. * * * has offered his services, in this capacity, to the committee on ecclesiastical affairs of the said company, and which committee is especially charged therewith by the Classis of Amsterdam; and the said classis having previously inquired as to this individual, and by examination have ascertained his fitness and experience for such a position; that on the report rendered by the said classis, and with the approbation and consent of the said Honorable Directors, he has been appointed schoolmaster, and sent in such capacity to N—— N——— with these specific instructions, to wit:

He is to instruct the youth, both on shipboard and on land, in reading, writing, ciphering, and arithmetic, with all zeal and diligence; he is also to implant the fundamental principles of the true Christian Religion and salvation, by means of catechizing; he is to teach them the customary forms of prayers, and also to accustom them to pray; he is to give heed to their manners, and bring these as far as possible to modesty and propriety; and to this end, he is to maintain good discipline and order, and further to do all that is required of a good, diligent, and faithful schoolmaster.

And inasmuch as N—— N——— is directed to conduct himself in this office according to these instructions, and he, on his part, has promised so to do, as well as to set a good example before youth and others: Therefore, these open letters, both credentials and instructions, are given him upon his sailing, to serve him as may be found necessary.

Thus done in our classical assembly held in Amsterdam, on * * *

¹ Eccl. Rec., p. 76. (Minutes of the Synod of N. Holland, 1629.)

² *Ibid.*, pp. 97-8.

While, in practice, only the Classis of Amsterdam was, after about 1629, concerned with the church affairs in New Netherland, in theory the classis had no unique place as we see in the following extract from the minutes of the Synod of North Holland of 1640.

The care of the churches in the East and West Indies does not belong to one particular church, or classis, or even to one synod; but it properly belongs to all the synods of the United Provinces, or to all the churches in general, of the Netherlands.¹

The first schoolmaster to be examined by the classis, under the regulations given above, was our old friend Adam Roelantsen, the minute of which was given on page 40. For the next 10 years the records of the classis, so far as yet published in America, contain no references to the schools of New Netherland. Complaints of lack of suitable schools at Brazil or Curaçao in 1638 and 1646² afford negative evidence that there was no lack in New Netherland, thus corroborating our previous discussions.

We have seen that Jan Stevensen left New Netherland in 1648. It may be interesting to exhibit in chronological order the joint working of the civic and ecclesiastical machinery in the effort to secure his successor.

✓ (1) September 2, 1648. D^e Backerus writes from New Amsterdam to the Classis of Amsterdam:

It will also be very necessary for the reverend brethren to send over with such a preacher a good schoolmaster. He should not only know how to read, write and cipher, but should also be a man of pious life, and decent habits. He should have a good knowledge of the principal points of our faith, and set a holy example to the children.³

(2) September 11, 1648. Stuyvesant and the New Amsterdam consistory write to the classis asking for an experienced schoolmaster. (For the date, see Eccl. Rec., p. 261; for an abstract of the letter, see the 8th item below.)

(3) September 22, 1648. D^e Backerus writes again to the classis, urging his former request. (See the 8th item below.)

(4) (Date not known.) Stuyvesant writes to the Lords Directors requesting that they look out for a schoolmaster, and proposing a man living in Haarlem.⁴

(5) October 26, 1648. A temporary successor to Stevensen is chosen (as voorlezer and voorsanger) by the director and council. (Quoted on p. 62.)

(6) October 26, 1648. The deputies, in formal meeting assembled, hear the first letter of Backerus:

A letter was also read from Rev. John Backerus. Since it was also in the highest degree necessary that a visitor of the sick and a schoolmaster be sent to that place, the meeting resolved to communicate this writing to the classis.⁵

¹ Eccl. Rec., p. 131.

² Eccl. Rec., pp. 114, 171, 173, 195, 196, 207.

³ *Ibid.*, p. 236.

⁴ N. Y. Col. Doc., xiv, 107.

⁵ Eccl. Rec., pp. 243-4.

(7) December 7, 1648. The Classis of Amsterdam also hear, in formal meeting assembled, the first letter of Backerus:

There was also read a letter from Rev. John Backerus. He also requests that the Reverend Assembly would be pleased, at the earliest opportunity, to see that another pastor be sent thither, and also a good experienced schoolmaster, whose services are very much needed at that place.¹

(8) December 28, 1648. The deputies hear the second letter of Backerus and the letter of the New Amsterdam Consistory:

A letter from Rev. John Backerus, pastor at Manhattans in New Netherland, dated Sept. 22d, 1648, was opened. In this he urged his former request. A letter was also read, accompanying the above, from the elders and deacons of the same church * * *. They also declare that they stand in great need of an experienced schoolmaster, since there was an increasing number of young persons, in order that they might be reared under better discipline. To this end they make mention of Samuel Bayart, bookkeeper and teacher of French and German at Bergen-op-Zoom, and of Daniel Samuels, also teacher of French and German at Haarlem; with the understanding that should either of these, or some one else of equal qualification, be induced to go thither, efforts would be made to provide a proper support for the same, in addition to the company's salary. Resolved, that we communicate the above correspondence to the next meeting of the classis.²

(9) January 27, 1649. The Lords Directors answer Stuyvesant's letter of the fourth item above:

We shall also look out now for a good school teacher and gather information concerning the man living in Haarlem, whom you propose.³

(10) (Date uncertain.) The Lords Directors apply to the classis for a schoolmaster, suggesting three names.⁴

(11) April 13, 1649, by the deputies, in formal meeting assembled, "it was resolved to answer at the earliest opportunity" the letters to New Netherland, one from the pastor, one from the consistory.⁵

(12) April 26, 1649. The deputies write to D^e Backerus:

We shall take into serious consideration what has been so earnestly commended to us. both in your communication, and in that of the Rev. Consistory, viz, to search out an experienced schoolmaster as pastor. The prosperity of the church is in the highest degree dependent on the proper training of the tender youth.⁶

(13) July 28, 1649. The Great Remonstrance complains of the lack of a schoolhouse and of suitable masters.⁷

(14) August 9, 1649. The Synod of North Holland in session at Edam is officially informed of the vacancy:

"Besides, a capable schoolmaster is in the highest degree necessary there."⁸

¹ Eccl. Rec., p. 246.

² *Ibid.*, p. 247.

³ N. Y. Col. Doc., xiv, 107.

⁴ Eccl. Rec., p. 265.

⁵ *Ibid.*, p. 249.

⁶ *Ibid.*, p. 250.

⁷ See above, pp. 60, 62.

⁸ Eccl. Rec., p. 260. The Synod of South Holland the next year received the same report. *Acta, etc.*, iii, 215.

(15) August, 1649. Stuyvesant again writes to the Classis of Amsterdam:

Besides the foregoing, we must again trouble your reverence with a second request, which we have heretofore presented to you. We need a pious and diligent schoolmaster and precentor. A year has now passed since we were deprived of such help. By this our young people have gone backward, even to grow wild, *quae nihil agendo male agere discit*. In view of the fact that a good schoolmaster is not less needed here, than a good preacher, as we have above explained in detail to your Reverences and to the Hon. Directors, we rely upon your usual excellent facilities and pious zeal for securing the one, and a favorable decision in the other. We hope, that in a short time we shall have occasion to thank you for both.¹

(16) (Date not known.) William Vestensz appears before the deputies, and is accepted for recommendation to the Lords Directors.²

(17) (Date not known.) Vestensz is recommended to the Lords Directors and by them accepted.³

(18) January 10, 1650. The deputies write D^e Megapolensis in New Netherland:

The bearer of this, *William Vestensz*, of Haarlem, goes as comforter of the sick; and schoolmaster, at the request of the Hon. Director Stuyvesant, and the church of Manhattan, and with the approval of the Honorable Directors of the West India Company. The said Honorable Directors also mentioned two others, so as to secure one of them, but they have not appeared, and we do not know their residence, else we might have corresponded with them. William Vestensz is an excellent God-fearing man. We trust that he may be acceptable, and do good service.⁴

(19) January 31, 1650. The deputies in formal meeting hear the report on Vestensz:

The Rev. President Swalmius, and the clerk, reported in reference to their commission that they recommend to the Messrs. Directors of the West India Company, William Vestensz of Haarlem, for schoolmaster and visitor of the sick in New Netherland, and that he has been accepted by the above-named gentlemen, and will be sent at the earliest opportunity.⁵

(20) February 16, 1650. The Lords Directors write Stuyvesant regarding Vestensz:

At your request we have engaged a schoolmaster, who is to serve also as comforter of the sick. He is considered as an honest and pious man and will come over by the first chance.⁶

(21) (Date not given.) A committee of the States-General, moved by the Great Remonstrance, announce a "provisional order" for New Netherland, in which provision is made for "good schoolmasters."⁷

(22) March 7, 1650. "The Rev. Deputies reported to the Classis of Amsterdam that William Vestensz, a schoolmaster from Haarlem, has been sent thither."⁷

¹ Eccl. Rec., p. 263.

² *Ibid.*, pp. 265, 268.

³ *Ibid.*, p. 268.

⁴ *Ibid.*, p. 265.

⁵ N. Y. Col. Doc., xiv, 119.

⁶ *Ibid.*, i, 329.

⁷ Eccl. Rec., p. 271.

(23) April 20, 1650. The Lords Directors again write to Stuyvesant:

The schoolmaster, for whom you asked, goes out with the ship: God grant, that he may confirm the good character, which he has borne here, and continue for a long time in the edification of the youths.¹

(24) August 6, 1650. Synod of North Holland in session at Alckmaer hears officially:

Sent to New Netherland—William Vestertsee of Haarlem, for siecken-trooster and schoolmaster.²

This list of 24 items is ample to show how the various officials co-operated to secure a schoolmaster at New Amsterdam. It is but just, however, to say that, so far as we know, no other schoolmaster called forth so much activity on the part of the officials. On the contrary, Hobocken and Pietersen, the two successors to Vestensz in the school at New Amsterdam, were secured apparently without the intervention of the classis, and in the case of Hobocken, even without its knowledge.³

The classis maintained an interest in the general welfare of its schoolmasters, not excluding concern for their temporal welfare. We have already seen (p. 57) how D^r Backerus asked the classis to intercede for Stevensen for his passage money. We have also seen how Vestensz wrote to them, when his compensation for work of sexton was, as he considered, wrongfully withheld, when ordinary salary payments were slow, and when he wished an increase of salary; and we note that his call was not unheeded.⁴

The part that the local church, through its consistory and church masters (*kerke meesters*), had in the control of the school under consideration seems to have been slight. As to the New Amsterdam church masters, exactly two references have been noted which connect them with the school. Both refer to the schoolhouse;⁵ so that we may conclude here that it was the duty of the church masters to see to the physical care of the church property, including the schoolhouse, if such there were belonging to the church.⁶ As no schoolhouse was ever owned by the New Amsterdam church (i. e., during the Dutch days), and as after 1653 the schoolhouse was provided exclusively by the municipality, the connection of the church wardens with the school, which was apparently never very active, ceased

¹ N. Y. Col. Doc., xiv, 123.

² Eccl. Rec., p. 278. The Synod of South Holland receives the same report a year later. *Acta, etc.*, iii, 269.

³ In the case of Pietersen, we have two references to the Consistory of Amsterdam, where the context would naturally call for classis. Whether this is a mere slip of the pen, or whether it has more meaning, the writer can not say. The instances are found in Pietersen's commission (Pratt, *op. cit.*, p. 18) and in the appointment of Hobocken to Stuyvesant's Bouwery (Dunshee, *op. cit.*, p. 29).

⁴ Eccl. Rec., pp. 306, 325, 331, 338.

⁵ They have already been brought to the reader's attention on pp. 60, 62.

⁶ See p. 194 for a more evident instance at Flatbush.

entirely, so far as appears, some 10 years before the English occupation. It may be remarked that this connection of the church with the school through the church masters, was at all times more nominal than real, since the church masters were not chosen by the church, but by the civic authorities. No records appear prior to 1656, but after that time the burgomasters nominated a double number of church masters from whom the director general made a selection of the proper number satisfactory to himself.¹ There need be no doubt that some such plan obtained throughout the Dutch period. Even during the first English period (1664-1673) the town council elected the church masters, as did the town meeting at Flatbush.²

The consistory, possibly, was more closely associated with the school than were the church masters, but here again the actual connection appears not to have equalled what was anticipated by the builders of church polity. There is some divergency in practice; but the tendency in New Netherland, as in Holland, seems to have been for the civic authorities to take increasing control. This appeared even more distinctly at Flatbush. (See p. 195.) In New Amsterdam the overt control by the consistory at all times seems slight, disappearing entirely from the records some nine years before the English came. Before that time three records occur, as follows: When Stevensen was leaving in 1648, Stuyvesant, who was an elder in the local church, wrote to the classis "at the request of the joint consistory"³ for "a pious and diligent schoolmaster and precentor." When Vestensz offered his resignation to the council, January 26, 1655, the answer was that his petition would be "communicated to the consistory and ministers."⁴ Some two months later (Mar. 3) "the Noble Lords of the Supreme Council (i. e., Stuyvesant and his council), with the consent of the respected consistory of this city, appointed Harmanus van Hoboken as chorister and schoolmaster of this city."⁴ With this reference, the recorded connection of the consistory with the city school of New Amsterdam ends. When Hoboken left and Evert Pietersen was elected, although every other body that could possibly be mentioned (except the schepens) was explicitly connected in some way with Pietersen's coming, the consistory appear to have had no part in it. Here, as elsewhere, with the coming of a stronger local secular authority, the power and influence of the consistory waned.

Nothing has been said as to the part taken by the ministers in the control of the school. The Synod of Dort specifically placed upon them the visiting of "all schools, private as well as public." How

¹ Rec. of N. A., ii, 50-1; vii, 126, 132, 142, 174-5, 237. The first instance, however, has no reference to burgomasters.

² *Ibid.*, vi, 18, 103, 145, 215.

³ Eccl. Rec., p. 261.

⁴ Pratt, *op. cit.*, p. 12.

much was actually done we can not say. Probably the ministers were more active and influential than would be inferred from our records, which come mainly from the civic side. Certainly they were, on the whole, the best educated men of the colony; and their interest in the public catechizing of the school children, which took place weekly in the church, would of itself be sufficient to keep them in close touch with the school, even if there were no visiting. There are several references which show that the ministers took a general interest in educational affairs, but few that point to any actual connection with the school.¹ The only reference that seems to imply certain participation in school control is that given just above, where Vestensz's resignation was by the director general and council "communicated to the consistory and ministers."

The discussion, as so far given, of local ecclesiastical control has taken no cognizance of the fact that the official schoolmaster was also *voorlezer* and *voorsanger* in the official church.² No pertinent fact, however, has been omitted, except the doubtful case of the selection of Pieter van der Linde to succeed Jan Stevensen as *voorsanger* and *voorlezer*, and this we have already discussed in the preceding chapter (p. 62). But as Van der Linde was elected by the director general and council without recorded reference to the consistory, we have either one additional instance of a schoolmaster selected with the (apparent) ignoring of the consistory; or the selection by the civic authorities of the exclusively church official of *voorlezer* and *voorsanger*. While the silence of the records is not proof that the consistory and minister did not in this instance express some wish or approval, we certainly seem authorized to conclude from the general discussion that only a slight share in the actual control of the school is to be accorded to the local church of New Amsterdam.

But if small actual control be allowed to the local church, there is no reason to doubt that the minister and consistory were interested especially in the religious teaching of the school; and that they stood ready to interfere by appropriate appeal if for any cause the proper religious instruction were not maintained. The nature of this interest and the general prominence within the community of the minister and church officials would give to them an influence probably quite commensurate with technical power of control in determining the actual conduct of school affairs.

The various secular or civic powers which had part in the control of the New Amsterdam school were the States-General of the United

¹ See Eccl. Rec., pp. 236-7, 250, 265, 331, 335. Pratt, *op. cit.*, pp. 19, 21, 34, 36. In connection, we may refer to the formal opinion of the Classis of Drente (1613) that "the minister should visit the schools every 14 days and examine pupils." Reitsma and Van Veen, *op. cit.*, viii, 172.

² See Chapter XIV, where this relationship is discussed in connection with the general religious character of the New Netherland schools.

Netherlands, the Lords Directors of the West India Company, the director general and council in New Netherland, the nine men, the burgomasters and schepens of New Amsterdam, and the burgomasters of New Amsterdam. The functions of these several bodies have already been given in general terms. We shall now proceed to examine in turn their particular dealings with the school in question.

The charter of the West India Company made that corporation almost all powerful in the affairs of New Netherland; but the States-General, as we saw in the first chapter, not only retained a general oversight over the company's activity, but also had specific voice in the Assembly of the XIX. Two suggested and two actual interferences in New Netherland school affairs by the States-General demand our attention: First, at some time apparently between 1630 and 1635 there was proposed, no one knows by whom, a "charter of freedoms and exemptions" quite similar to that promulgated by the company June 7, 1629, but with the important exception that this was to be "granted by the High and Mighty Lords States-General, *ex plenitudine potestatis*." The twenty-eighth provision of this charter was almost identical with the twenty-seventh of the 1629 exemptions quoted in the first chapter. This has been quoted by writers on the subject as bearing on the schools of New Netherland, and particularly on the school at New Amsterdam. With regard to this it should be said that not the slightest proof is available that the States-General ever adopted these "freedoms and exemptions," and the presumption is that they did not adopt them. Moreover, while there are subsequently specific references to the "freedoms" of 1629, these references are of such nature as to make it improbable that the 1630-1635 "freedoms" were ever given binding force.¹ Furthermore, as for any bearing of this item on the school at New Amsterdam, it is sufficient to note that by number five of these proposed articles the "Island of Manhattes" is expressly exempt from the provisions of the document.

Second, the States-General, in 1638, reviewing the state of affairs in New Netherland and in Brazil, took note of the fact that in the latter place no order had been "taken for the establishment of schools for the education of the rising youth," and instructed "their deputies to the Assembly of the XIX" to assist in arranging for them. The concern for New Netherland, as expressed in the same paper, is "that the population, which had been commenced, is decreasing and appears to be neglected by the West India Company." This action of the States-General shows positively a disposition on the part of that body to insist upon proper schools within the company's territory, and, negatively, that the educational interests of New Netherland were at that time not neglected by the company.

¹ See N. Y. Col. Doc., I, 83-88, 150, 154, 251.

The most widely quoted connection of the States-General with the New Netherland schools concerns the question of a public-school tax. In 1638, Johan de Laet, one of the directors of the company, drew up certain "Articles and conditions" for the better colonization of New Netherland and on August 30 submitted them in behalf of the company to the States-General for their approbation. The eighth of these, widely quoted as "the first record of a public tax for school purposes," reads as follows:

Each householder and inhabitant shall bear such tax and public charge as shall hereafter be considered proper for the maintenance of clergymen, comforters of the sick, schoolmasters, and suchlike necessary officers; and the director and council there shall be written to touching the form hereof in order, on receiving further information hereupon, it be rendered the least onerous and vexatious.¹

But the fact is that the "Articles and conditions" were rejected by the States-General. The record is clear. They were "exhibited 30th of August, 1638" and were immediately referred to a certain-named committee "to view and examine them and report."² On September 2 this committee reported, "which being taken into deliberation, their High Mightinesses have resolved and concluded to hereby declare that the aforesaid articles, drawn up by the Amsterdam Chamber, are, in their present form, not adapted to the service and promotion of the colonies of New Netherland."³ Thereupon the "Articles and conditions" were "again returned to Sieur Johan de Laet;" which ended them "in their present form." We may anticipate by saying that at no time in the history of New Amsterdam was any such tax levied.

The last known reference of the States-General to the schools of New Netherland was after the "Great Remonstrance" in 1649. The remonstrants had complained of the need of a schoolhouse, of the lack of a settled master, and of an inadequate teaching staff.⁴ After extended consideration by the States-General, a committee brought in a "provisional order respecting the government, preservation, and peopling of New Netherland." The sixth article of this specified that "the commonalty shall be also obliged to have the youth instructed by good schoolmasters."⁵ This "provisional order" was referred to the Amsterdam Chamber, which on April 11 returned it with various remarks, ignoring, however, the reference to schools; and this ended the matter. We may conclude, then, by saying that while the States-General were interested in New Netherland, and even in its school affairs, they did nothing which directly and in itself influenced any of the New Netherland schools.

¹ N. Y. Col. Doc., i, 112.

² *Ibid.*, p. 114.

³ *Ibid.*, p. 115.

⁴ See above, pp. 60, 62.

⁵ N. Y. Col. Doc., i, 389. The date seems uncertain, probably about the 1st of April, 1650.

If the States-General did little for the schools of Dutch America, it was quite otherwise with the next highest civil authority, the Lords Directors of the company. While these worked largely through their local representatives, the director general and council, it is none the less true that New Netherland affairs were directed, often in minutest detail, by the Lords Directors of the Amsterdam Chamber. The school affairs of New Amsterdam came particularly before them for consideration.

First, they paid the salaries of the New Amsterdam schoolmasters out of the company's general funds. We have already seen this in the estimate of colonial expenses of December 15, 1644, in which was the item "1 schoolmaster, precentor and sexton at fl. 30, 360."¹ We saw the custom further in the power of attorney given by Jan Stevensen to collect for him from the company some seven hundred and odd guilders "by balance and settlement of his account according to the book of monthly wages No. F folio 34 earned from their honors in Netherland."² Later when Stevensen was leaving and Stuyvesant had charged his account with the passage home, D^r Backerus asked the classis "please to assit him with the directors, that he may be exempted from this hardship."³ When Pietersen was selected by the Lords Directors in 1661 they named his "salary of g. 36 per month, and g. 125 annually for his board."⁴ On October 11, 1664, a month after the English occupation—perhaps an empty pay day had rolled around—"Mr. Evert Pietersen, schoolmaster of this city" appearing before the city court, "represents as his allowance from the company is struck off, that burgo-masters and schepens shall be pleased to keep it at the same allowance."⁵

From some data yet to be discussed (see p. 86ff) it appears possible that during 1654 the municipality paid part of the schoolmaster's salary. It is quite true that the city regularly furnished the master with a "free house for school and residence." With this modification and this possible temporary exception, it seems safe to assert that the company paid the salaries of the official elementary school at New Amsterdam.⁶

The "free house for school and residence" we have already discussed in connection with the several schoolmasters. There was found no evidence that the company ever supplied the schoolhouse. On the contrary, we noted uniformly the opinion that the people must furnish that. The only exception was the offer of Stuyvesant

¹ N. Y. Col. Doc., I, 155.

² N. Y. Col. MSS. II, 150.

³ Eccl. Rec., p. 237.

⁴ Dunshee, *op. cit.*, p. 28.

⁵ Rec. of N. A., v, 137.

⁶ A further apparent exception is discussed on p. 91.

in 1647 "to bear personally and in behalf of the company a reasonable proportion." As the schoolhouse was never built, this exception was more apparent than real. In connection with the support of the New Amsterdam school by the company it is proper to consider the so-called charter of freedoms and exemptions of 1640. One item of this provided that for the purpose of maintaining the Reformed religion "as it is at present preached and practiced by public authority in the United Netherlands," "the company shall provide and maintain good and suitable preachers, schoolmasters, and comforters of the sick."¹ This provision has been used from time to time in discussions relating to the New Netherland schools, particularly in relation to the New Amsterdam school. The company appears to bind itself to support ministers, schoolmasters, and comforters of the sick in the colonies. However, the document was drawn up for the purpose of promoting colonization by the founding of new colonies or settlements, and as again the company especially reserved the "Island Manhattes to itself" it seems unwarranted to apply these provisions to New Amsterdam. While we are not here concerned with its application to schools elsewhere, we may say, first, that there appears no certainty that the document was ever adopted;² second, that there is no instance where the company did help with a school off Manhattan until after a new "charter of freedoms and exemptions" was issued in 1650, in which the 1640 school provision had been dropped and the provision of 1629 (almost identical) put in instead.³ We may accordingly dismiss from any serious consideration this "charter" of 1640.

The control of the school by the Lords Directors was at times exercised directly and at times left to the director general and council. In general, however, the Lords Directors kept in close touch with everything. We saw above that the salary schedule of 1644 was drawn up in Holland. We noted also how Stevensen's passage money was charged in New Netherland to be finally settled in Holland. We saw how the Lords Directors were informed by Stuyvesant of the need of a schoolmaster in 1648, how names were suggested by him to them and by them referred to the classis, how upon the recommendation of the classis, Vestensz was engaged by the Lords Directors and sent to New Amsterdam. Vestensz, it is true, was given up and Hoboken was elected by the director and council. But in the case of Pietersen, the Lords Directors specify exact details: "We have engaged," they said, "on your honor's recommendation

¹ N. Y. Col. Doc., I, 123.

² O'Callaghan (*History of New Netherland*, I, 218) and Brodhead (*op. cit.*, I, 311), however, accept it. But see the apparent postponement of its adoption in N. Y. Col. Doc., I, 118, and subsequent references apparently ignoring its binding effect, *ibid.*, pp. 150, 154, 251, 363.

³ N. Y. Col. Doc., I, 401 ff.

and that of the magistrates of the city of New Amsterdam, Mr. Evert Pietersen as schoolmaster and clerk upon a salary of g. 36 per month and g. 125 annually for his board.¹ It is typical of their general management that when Curtius, the Latin master, wished board money in addition to his salary, Stuyvesant refers the request to the Lords Directors with the words: "Your repeated instructions do not allow us to raise anybody's salary without your knowledge."²

That the Lords Directors should concern themselves with so small a matter as the school books indicates their attention even to the minutest affairs of the colony. They sent the books over to the director general to be sold to the pupils. On one such occasion he was told: "After the school books and stationery to be used for the education of the youths, stated in the inclosed invoice, you will please to look yourself."³ When Pietersen was sent over the Lords Directors gave these explicit directions to Stuyvesant:

And whereas he solicited to be supplied with some books and stationery, which would be of service to him in that station, so did we resolve to send you a sufficient quantity of these articles, as your honor may see from the invoice. Your honor ought not to place all these at his disposal at once, but from time to time, when he may be in want of these, when his account ought directly to be charged with its amount; so, too, he must be charged with all such books of which he may be in want as a consolers of the sick, which he might have obtained from your honor, which afterwards, might be reimbursed to him, whenever he, ceasing to serve in that capacity, might return these; all this must be valued at the invoice price.⁴

We conclude from the foregoing that the Lords Directors paid the master's salary from the company's treasury;⁵ that, in the main, they controlled the school either directly by their own action or mediately through the director general and council; and that even the small details passed before their eyes for approval.

In discussing the part played by the director general and council in the support and control of the New Amsterdam school, we are distinguishing this body on the one hand from their superiors, the Lords Directors; and on the other, from their inferiors, the bodies of lesser local control, the nine men, the burgomasters, and the New Amsterdam city court ("burgomasters and schepens"). The only director general of whose school relationship we have record is the autocratic Peter Stuyvesant, "our Grand Duke of Muscovy," as one of the remonstrating nine men called him. His own opinion of his relation to the council may be inferred from certain of his words,

¹ Dunshee, *op. cit.*, p. 28. For the part played by the director general and council in this, see next page.

² N. Y. Col. Doc., xiv, 445. See also Chapter VI below for the management of the Latin school.

³ N. Y. Col. Doc., xiv, 429.

⁴ Dunshee, *op. cit.*, p. 28.

⁵ The sources of income to the company were various. It was a trading company, and accordingly made gain in that manner. It levied duties on exports and imports, collected excise on liquors; in fact, it did almost everything but levy a direct property or poll tax.

apropos of an adverse vote: "I condescend to acquiesce in the majority of votes.¹" Generally, therefore, when we say "director general and council," we really mean Stuyvesant, whose will practically was law.

The discussion already given has made it clear that with respect to the Lords Directors, the director general and council served merely as their agents, acting always for them, and only with so much power as prudence prompted the Lords Directors to confer in order to secure efficient management in so remote a situation. When the Lords Directors did not directly choose a teacher, the director general and council exercised the right. This they did in two or three instances, which we have already discussed, Hobocken, Cornelissen, and (if he were schoolmaster) Van der Linde. Of these Hobocken is the only certain case.

An interesting inquiry, however, arises in connection with Evert Pietersen's election. The commission of Pietersen² as sent by the Lords Directors to Stuyvesant, when read in its entirety, fairly rings with the final and supreme authority of the Lords Directors. Yet, for all that, the burgomasters evidently considered that the director general and council must in some way approve before the appointment could become final or at least effective, as we see from the following resolution of the burgomasters apropos of Stuyvesant's demand for a schoolhouse and dwelling for Pietersen:

As soon as Master Evert Pietersen has been appointed schoolmaster, etc., by the director general and council and the burgomasters have been notified of it, they will dispose of the matter.³

It does not seem necessary, however, to find in this anything difficult of adjustment with what has been said above. Quite possibly the burgomasters were not fully informed of the situation, or they may have expected Hobocken to fill out the quarter. Doubtless, too, Stuyvesant, as a true autocrat, had long since accustomed the city officials to consider his approval as necessary to give validity and effectiveness to any public measure.

Instances where the salary question came before the director general and council have been seen in the question of Stevensen's passage money, in the case of Vestensz's request for increased salary as told us by D^r Megapolensis and in the fixing of Hobocken's salary when he was elected to succeed Vestensz.

Small matters of only local concern, the director general and council managed wholly or shared with bodies of local control. They evidently fixed for Hobocken the rates of tuition as well as his salary: "Said schoolmaster shall communicate to burgomasters and schepens,

¹ Pratt, *op. cit.*, p. 33.

² *Ibid.*, p. 19.

³ Minutes of the Orphan Masters, ii, 97.

what he is allowed for each child per quarter, pursuant to instructions from the director general and council."¹ The "instructions" here referred to are almost certainly similar to those which we saw issued to Evert Pietersen.²

The Dutch seem to have been partial to such detailed tables of instructions. Several in Holland³ at the same period are available. At least eight are found in the Flatbush records;⁴ another relates to a Brooklyn master; and a number have come down to us from the school of the Reformed Dutch Church of New York City.⁵

The "instructions and rules for Schoolmaster Evert Pietersen" were "drawn up by the burgomasters of this city with the advice of the director general and council." This "advice" of the director general and council eight years after the municipal powers had been granted to the city shows how loath Stuyvesant was to give up his immediate control. But the city increased its share in the management of its affairs. In the case of Hoboken, Stuyvesant appears to have issued the instructions without even communicating with the city authorities. With Pietersen we may suppose that Stuyvesant told the burgomasters only in general what was to be done, although he probably passed finally upon their draft.

During the last year of the Dutch régime the director general and council passed (March 17, 1664) a civil ordinance regulating the public catechizing of the school children.⁶ Just why this act on the part of the civil authorities was considered necessary is not clear. But we see in such an act on the part of the director general and council not only their direct participation in local school affairs, but also a very interesting instance of the close connection that existed between church and state.

In everything the director general and council appear as the faithful agents of the Lords Directors. They struggled to keep all control in the company's hand and to keep down all expenses. Stuyvesant, however—it is but just to say—deserves special mention for his individual interest in education. No appeal for better educational facilities ever met refusal from him.⁷

Of the nine men, or tribunes, we know so little that it hardly seems necessary to mention them in this connection, especially as every reference to them save one has already been utilized in other connections. In 1647 the council referred to the tribunes the building of a school. Stuyvesant wrote them about it, but so far as is known

¹ Rec. of N. A., li, 39.

² See p. 67.

³ Beernink, *op. cit.*, p. 113 ff.; Douma, *op. cit.*, p. 92-3.

⁴ Of dates 1660, 1663, 1666, 1670, 1680, 1681, 1682, 1773. See Chapters VIII and XII.

⁵ Eccl. Rec., pp. 2337 ff., 2340 ff., 2374 ff., 2619 ff., 2626-7, 2628 f., 4260 ff.

⁶ O'Callaghan, *Laws of New Netherland*, p. 461.

⁷ See Pratt, *op. cit.*, pp. 8, 33-4; N. Y. Col. Doc., xiv, 107, 123, 169, 232-1; Eccl. Rec., pp. 247, 263.

nothing was done. The "Great Remonstrance" of 1649 was the work of the nine men. They complained of the misappropriation of the funds collected by public subscription for a schoolhouse and of the irregular manner in which the school was kept, and expressed opinion that two masters should be employed. We are not able to say that anything was effected for the school by their complaints. In 1654 Stuyvesant told the burgomasters and schepens that he had "repeatedly reminded the former nine men * * * of the absolute necessity to devise, as customary in other countries and especially in the Fatherland, some means to provide revenue"¹ for the general expenses, including the school; but we have no evidence that the nine men ever did anything with regard to Stuyvesant's reminders, or that they ever really accomplished anything for the school.

Quite otherwise, however, was it with the burgomasters. For about four years after the granting of municipal powers to New Amsterdam in 1653, these appear to have met, as a rule, conjointly with the schepens. For this period the city support and control is in the hands of this joint body. After March, 1657, so far as appears, the burgomasters alone are concerned with the elementary school. As between the two bodies, then, it is not a question of contemporaneous conflicting or contrasted powers of support and control, but a question of the separation about 1657 of the more purely administrative from the other functions of the city court. In other words, the city control of the elementary school is but one continuous story, the first chapters of which are found in the minutes of the joint body, while the last chapters are found in the administrative minutes of the burgomasters alone.

Beginning in November, 1653, and lasting for a full year, the city court was in continual dispute with the director general and council on the question of the source and proper expenditure of the city's finances. As the salary of "one precentor being at the same time schoolmaster" is one of the elements in the dispute, it becomes necessary for us to enter somewhat into the details of the discussion in order to decide whether during this period the city of New Amsterdam or the West India Company supported the schoolmaster. Especially must we make this examination since the question of local support of the New Amsterdam school has been much beclouded by reckless assertions.

The New Amsterdam city government was organized February 2, 1653. The powers granted, however, were small. Later in the year the burgomasters and schepens "asked the community to provide means for paying the public expenses and keeping in repair the works; and were answered, "if the honorable director general will allow the excise to be paid to the treasury of the city and for the

¹ N. Y. Col. Doc., xiv, 282.

city's benefit, they would willingly contribute.¹ Accordingly, on November 11, "some of the most influential burghers and inhabitants of this city having been lawfully summoned," "the burgomasters and schepens declare that they have obtained the consent of the honorable director general to have henceforth the excise on wine and beer paid into the office of the burgomasters and schepens, for the benefit of the city," and "the magistrates ask the community whether they will submit to such ordinances and taxes as the magistrates may consider proper and necessary for the government of this city." Thereupon the burghers and inhabitants "all answered 'yes' and promised to obey the honorable magistrates in everything, as good inhabitants are in duty bound to do, confirming it with their signatures."¹

A little later the burgomasters and schepens applied formally to Stuyvesant for the excise. He replied, again orally, granting their petition for "the excise of the beer and wines consumed here (except what is exported)" "provided that their worships of the court will support the two preachers, the schoolmasters, and secretary." These salaries amounted to 3,200 g. annually, which was more than the usual income from the excise. The burgomasters and schepens seeing this, "unanimously resolved to go in a body to the director general and demand in conformity with his promise the grant of the entire excise as received at the company's counting house." This effort to get the *entire* excise failed. Stuyvesant had meant all the time only the tavern-keepers' excise, but not the citizens' excise as well. The following week the burgomasters and schepens presented a petition to Stuyvesant, asking for a formal transfer of the excise. Stuyvesant's reply was substantially the restatement of the conditions above given. On the one hand, "the common (i. e., the tavern keepers') excise on wine and beer consumed within this city;" on the other, "the maintenance of the public works in the city and the subsistence of the ecclesiastical officers."² Upon receipt of this the city advertised the excise. But a month later we find them writing to the Lords Directors in Amsterdam, asking for powers "not so extremely limited;" saying besides that "the revenue from said excise" amounted "to no more than one-third" of the annual pay roll, whereas "the maintenance of the city works and other wants of the city" of themselves would require all the revenue; and asking in view thereof that the excise might be granted "without any limitation" and that they might furthermore be "authorized to levy some new imposts and other small fees," and besides might have "the farming of the ferry from this place to Breuckelen."³

Before hearing from the Lords Directors on this request the burgomasters and schepens petitioned the director general and council for

¹ N. Y. Col. Doc., xlv, p. 220.

² *Ibid.*, p. 221.

³ Rec. of N. A., i, 144.

petition to "impose provisionally for the benefit of this city"¹ certain duties on imports and exports and a certain schedule of excise duties additional to those already granted. In reply (February 23, 1654) the director general and council consented to the "proposed citizens' excise" on the same terms as "the tavern keepers' excise" previously allowed, but declined to allow the duties on imports and exports, because they concerned "the country at large and not any particular city or place."²

During this time the ministers and the schoolmasters were dependent on the city government for their pay. The classis received a letter (May 11, 1654) from Vestensz complaining of "slow payments."³ On June 1 the ministers petitioned for their "half year's allowance;" and the director general and council ordered the burgomasters and schepens "to furnish the accrued half year's salary out of the receipts according to promise."⁴ In the meanwhile the Lords Directors wrote (May 18, 1654), declining to excuse the city government from the salaries, but allowing them to "lay any new small excise or impost with the consent of the commonalty" unless the director general and council should "have any reasons to the contrary."⁵

Apparently Stuyvesant's order of June 1, that the salaries be paid, was not obeyed, for it was repeated on June 8, and again more emphatically on August 3.⁶ In answer to the last demand, the burgomasters and schepens replied that of the 16,000 guilders expended in military defense, which was a part of Stuyvesant's demand, the share of New Amsterdam was 3,000 guilders; and to meet this they requested permission "to lay a tax on real estate." Accompanying this petition was an account of the expenditure of the excise. This showing was not "acceptable" to Stuyvesant, since it included, "for instance, a certain amount of money paid" to Francis le Blue. (This Blue was sent to Holland as the city's agent to plead with the Lords Directors for more power.) While "for decency's sake" the director general and council passed these "over in silence," still "induced by those and other reasons" they resolved (August 13) to take back, after the current year, the excise into their own management.⁷

This communication the burgomasters and schepens resolved to ignore, relying upon the previous order of the Lords Directors (May 18); and they accordingly wrote Stuyvesant, August 24, on behalf of this city of New Amsterdam, offering to pay "for the ecclesiastical establishment, the salaries of one of the preachers, one precentor who is to be schoolmaster at the same time, one beadle."⁸ But Stuyvesant was determined. "The accounts submitted [show] that the

¹ N. Y. Col. Doc., xlv, 247.

² *Ibid.*, p. 248.

³ Eccl. Rec., p. 325.

⁴ Rec. of N. A., i, 206.

⁵ *Ibid.*, p. 219.

⁶ N. Y. Col. Doc., xlv, 271, 282-3.

⁷ *Ibid.*, p. 284.

⁸ *Ibid.*, p. 289.

revenue from the excise was not employed * * * in paying the minister's salary * * *. As burgomasters and schepens do not fulfill their promise * * * the director general and council are compelled to let the said excise to the highest bidder * * * and to employ the proceeds in promptly providing for the support of the clergy. By these plans the burgomasters and schepens will be excused and delivered from carrying out their offer, to support at their expense, one clergyman, one schoolmaster, and one beadle."¹

With this action of September 16 the matter rested until November 23, when there appeared the handbills of the director general and council announcing the public auction of the excise. Then the burgomasters and schepens again protested, quoting the order of the Lords Directors; but Stuyvesant considering that this had been already "sufficiently answered" made no reply.² Six months later (May 26, 1655) the Lords Directors wrote to the city court accepting Stuyvesant's view of the situation, saying that they had "resolved to have the collection of this (excise) money made again by the financial officer of the company there."³

With this the quarrel ended. It seems fairly certain that up to September 16 not all of the salaries due the clergymen had been paid, and quite possibly no part of the city's revenue had gone in that direction. As the schoolmaster was part of the "ecclesiastical establishment," it seems reasonably certain that he likewise had been partly or wholly deprived of his salary. What had taken place up to September 16 remains thus partly in doubt. What took place during the rest of the year is wholly unknown. With the year 1655 it seems clear that the company itself reassumed the duty of providing the salaries. Whether the past-due salaries—if such there were—were then paid, can not now be said.

What revenues the city had after this controversy and what expenditures it was responsible for, may be gathered from the reply made by the burgomasters and schepens to the last-quoted letter of the Lords Directors.

We have, moreover, already burdened the commonalty with one stiver in the guilder [5 per cent] on the cattle slaughtered in this city besides the burgher excise on wine and beer [Stuyvesant had taken back the tavern-keepers' excise], the income from which by no means covers the repair and establishments of the city, much less what is most urgent, the repairs and erection of the city walls * * *; the repair of the city hall, watch houses, the building of schools, the construction of the canal, and other similar matters.⁴

That the city government accepted the responsibility of providing a schoolhouse appears in the letter above given, where "the building of schools" is apparently included among the things "most urgent."

¹ N. Y. Col. Doc. xiv, 293.

² *Ibid.*, p. 306-6.

³ *Ibid.*, p. 325.

⁴ Rec. of N. A., II, 217.

That, however, nothing was done before November 4, 1656, seems evident from the following court minute:

1656, November 7.

To the Honorable Lords Burgomasters and Schepens of the City of New Amsterdam: Harmen van Hobocken, schoolmaster of this city, respectfully requests that your honors would be pleased to grant him the hall and the side room for the use of the school and as a dwelling, inasmuch as he, the petitioner, does not know how to manage for the proper accommodation of the children during winter, for they much require a place adapted for fire and to be warmed, for which their present tenement is wholly unfit. He, the petitioner, burthened with a wife and children, is greatly in need of a dwelling for them, and his wife is expected from hour to hour to be confined, so that he anticipates great inconvenience, not knowing how to manage for the accommodation of the school children; and if your honors can not find any, he, the petitioner, requests your honors to be pleased to allow him the rent of the back room which Geurt Coerten at present occupies, which he, the petitioner, would freely accept for the present, as he is unable to pay so heavy a rent as a whole house amounts to. He therefore applies to your honors, expecting hereupon your honors' favorable endorsement.

Was subscribed,

Your honors' servant,

HARM. VAN HOBOKEN.

Dated 4 Nov., 1656.

Endorsement.

Whereas the city hall of this city, the hall and the little room whereof the petitioner now requests for a school and dwelling, are not at present in repair, and are, moreover, required for other purposes the same can not be allowed him; but in order that the youth, who are here quite numerous, may have the means of instruction as far as possible and as the circumstances of the city permit, the petitioner, for want of other lodgings, is allowed to rent the said house for a school, for which one hundred guilders shall be paid him yearly on account of the city for the present and until further order. Done in court this 4th of November, 1656. At Amsterdam in New Netherland.¹

We can well sympathize with Master Hobocken. In the winters of New Amsterdam the school children would indeed "much require a place adapted for fire and to be warmed." To see winter approaching in a "tenement wholly unfit" for so necessary a purpose was of itself enough to make the poor man seek "proper accommodation." It pleases us to see that the worthy burgomasters and schepens did not turn an entirely deaf ear, and that the circumstances of the city did permit its schoolmaster to have a "whole house." Apparently, the "back room" occupied by Guert Coerten contained the only and much-desired "place adapted for fire." With that room, in addition to what he already had, every need could be met, and the church records duly report the baptism of a son to Master Hobocken on November 12, 1656.

This appropriation by the local authorities for the rent of a school is quite in line with the uniform division of school support. It was the duty of the people to furnish school quarters and of the company to provide the master's salary. With this act appropriating rent for the

¹ Rec. of N. A., II, 219-220.

schoolhouse, the burgomasters and schepens as a joint body disappear from the elementary school records. In a few months the burgomasters began to meet separately, and to their records we now go as the direct continuation of the present account.

The first reference found in the burgomasters' minutes is difficult of interpretation, because on the face it appears to contradict flatly the conclusion tentatively reached above that the schoolmaster's salary came only from the company. An administrative minute of January 16, 1660, reads as follows:

Mr. Hermen van Hoobocke requests by petition, that he may receive an *allowance* from the city, as he is behind hand with the building of the school, and for divers other reasons set forth in the petition; on which petition is apostilled: Petitioner is allowed to receive his current year's *salary*, which shall be paid to him at a more convenient season on an order of the burgomasters on the treasurer, and his allowance henceforth is abolished.¹

It must be admitted that if it agreed with other references, both preceding and succeeding, to understand that the "allowance" herein "abolished" was Hobocken's ordinary salary paid by the burgomasters from their treasury, the minute quoted would apparently afford substantiating evidence of such a customary procedure. But our tentative conclusion as to the source of the salary is directly opposed to this. What then shall we say as to this minute? Must we modify our previous opinion? Might it not be that, although all the preceding evidence has pointed in the one direction, nevertheless the city had, in the three or four years between the preceding references and this, again undertaken to pay the salaries which Stuyvesant resumed in September, 1654. The objection to this interpretation is that there is no reference other than the one under consideration which even looks in that direction, while others contradict it. We have already seen some of the evidence. When Evert Pietersen was elected, the Lords Directors specifically fixed Pietersen's salary. This would hardly have been done if the salary was to come from another treasury than their own. Of the free schoolhouse to be furnished by the city the Lords Directors properly said nothing. Again, after the English had come, Pietersen told the burgomasters and schepens that his "allowance from the company" was "struck off." If he had been receiving his salary from the men he was then addressing, he would hardly have chosen these exact words. And in a subsequent petition (September 19, 1665) to the reorganized city court he said "he was heretofore paid his wages by the honorable company."²

In the face of such direct statements, fitting, as they do, with so much of indirect evidence, we seem compelled to reexamine the minute under consideration and ask whether it can not receive an

¹ Rec. of N. A., vii, 244.

² Ibid., v, 294.

interpretation which shall agree with other pertinent evidence and at the same time do no violence to its own words. And may we not find the key to the solution in the annual appropriation of 100 guilders for a schoolhouse, first made in November of 1656? While this was not a *salary* in the strict sense, it was an *allowance* "paid him yearly on account of the city." The payment of this allowance may have been slow (the "convenient season" suggests as much), so that Hobocken may have asked for what was already promised with possibly an increase. The answer of the burgomasters, as it seems to the writer, can easily mean that they were willing to continue the 100 guilders rent allowance for the year 1660, but for no longer. This suggested interpretation of the minute while possibly not the one that would ordinarily present itself upon a first reading, nevertheless seems the only one that fits the other known facts. So far, then, it still seems probable that the schoolmaster's salary in the proper sense came from the company.

In the administrative minutes, quoted on pages 67 and 84, we saw it clearly understood between the director general and council, on the one hand, and the burgomasters on the other, that the latter should provide "a proper dwelling and schoolhouse." The only question in mind then was when such a house would be needed. It appeared from a minute a few days later¹ that the burgomasters decided to proceed immediately with the erection. But evidently something stopped them, for some months later (February 2, 1662) we find them addressing a petition to the director general and council stating that they wished to erect "a suitable school (house), for which is required a suitable and well-situated lot." Then follow the request for a lot on Brouwer Street 30 by 15 feet and the declination of Stuyvesant on the ground that it was "more convenient that the school (house) be erected on a part of the present graveyard."² As to the merits of the several possible locations for a good schoolhouse we can of course say nothing. The lot on Brouwer Street may have been "well situated;" but that a "suitable school (house)," even for those early times, could be built on a lot only 30 by 15 feet seems inexplicable. If Stuyvesant had objected to the proposed lot on account of its size, we could better approve his action. Whether his refusal to grant the petition of the burgomasters stopped their plans for building can not be said; but, as previously pointed out, the evidence is to the effect that the house was never built.

That the burgomasters controlled the internal affairs of the school (subject to the "advice" of the director general and council) has been sufficiently shown in connection with the "instructions and rules for schoolmaster Evert Pietersen."³ There is nothing to be added

¹ Minutes of the Orphan Masters, etc., II, 103.

² See pp. 67, 85.

³ N. Y. Col. MSS., vol. 10, part 1, pp. 39-40.

to the discussion there given. It thus appears, in conclusion of this and the preceding item, that the school in New Amsterdam was looked upon as the city school; its master was "the schoolmaster of this city," and should therefore properly receive his maintenance from the city, and that this was "customary in other countries and especially in the Fatherland;"¹ that, however, for lack of sufficient revenue the city could not provide the necessary salary, so that the company had to resume the support of the master. The city did, nevertheless, furnish a schoolhouse and dwelling for the master and made the regulations under which he taught.

The question of support would not be complete without reference to the question as to whether tuition was charged or whether the salary of the master was his sole remuneration.

In the case of Pietersen, we saw from his instructions (p. 68) that "besides his yearly salary," he was "allowed to demand and receive from every pupil quarterly" tuition graduated according to the studies taken; but "the poor and needy, who asked to be taught for God's sake, he shall teach for nothing." Such an explicit statement is lacking in the case of the other masters, but there is no evidence which could deny the prevalence of the custom. The reference already given in the case of Hoboken, as to "what he is allowed for each child per quarter pursuant to instructions from the general and council" can only refer, it appears, to tuition charges similar to Pietersen's. This is corroborated by the universal custom in Holland and by the unvarying practice in the outlying Dutch villages, as will later appear. With this corroboration, with the specific instances quoted, with the absolute lack of any contradictory evidence, it seems perfectly safe to conclude that the regulations in the case of Pietersen were customary at New Amsterdam. Each child paid quarterly 30, 50, or 60 stivers tuition, according to the studies taken, only the "poor and needy" were exempt, and this as a charity.

A brief summary may help to bind together the disconnected discussions of this extended chapter. The elementary school of New Amsterdam was the joint concern of church and state. The church entered as a copartner in the school in the fact that, among the Dutch, it was the universally accepted duty of the schoolmaster to teach religion through the catechism and other church formularies. As theological divergence was the worst of all errors, and as the influence of the school was now recognized as transcendently great, it had become the peculiar duty of the church to safeguard the chair of instruction. Accordingly, the Classis of Amsterdam—in special cases, the local minister and consistory—examined the prospective New Amsterdam masters as to their fitness, especially for their reli-

¹ N. Y. Col. Doc., xiv, 282,

gious duties. A like supervision, the church exercised—in theory at least—over the actual teaching of the school.

The civil authorities conceived their interests and responsibilities in a manner strikingly similar to what is common in America to-day. They chose the masters—frequently upon ecclesiastical recommendation—paid their salaries, furnished the schoolhouse, and gave the directions under which the masters taught. In the division of civic function, the States-General exercised only a broad oversight, serving more as a court of final appeal than as an executive or legislative agency. The Lords Directors from the general treasury of the company furnished the money for the salaries, directed the general affairs of the school, and besides held themselves free to control even its minutiae. The director general and council acted only as the agents of the company, but exercised much power in the service of their lords. The city authorities, but for decaying finances and an autocratic director, would have furnished a sufficient support and the sole control of the city school. As it was, their financial support extended (apparently) only to furnishing the schoolhouse, while the control was always subject to Stuyvesant's "advice." In spite, however, of any thwarting of purpose, enough was done by the secular authorities to present a remarkable anticipation of the American public school.

CHAPTER VI.

THE LATIN SCHOOLS OF NEW AMSTERDAM.

In seeking the earliest suggestion for a Latin school at New Amsterdam some have followed Brodhead, who says that "an academy was contemplated" in 1650.¹ This idea seems to have arisen from a misconception of Van Tienhoven's reply to the "Great Remonstrance." As ordinarily translated this part of the reply reads, "It is true there is no Latin school or academy, but if the commonalty desire it, they can furnish the means and attempt it."² The word "academie" of the original, however, should be translated "university." Evidently from this reply and so far as appears from the Remonstrance,³ no one can conclude that either a Latin school or a university in New Amsterdam was contemplated at that time.

The first certain reference to a Latin school appears to be in a hitherto unsuspected place. A mistranslation had concealed the meaning. The passage which we give below, correctly translated, is from a letter of the Lords Directors to Stuyvesant, of date April 4, 1652:

We also agree with your proposition to establish there a trivial (*triviale*) school and believe a beginning might be made with one usher (*hypodidasculum*) who could be engaged at a yearly salary of 200 to 250 guilders. We recommend for this position Jan de la Montagne, whom we have provisionally appointed to it; and you may use the building of the city tavern if you find it suitable.⁴

Since we have practically no other knowledge of this school, the question as to what kind of school it was turns upon the meaning of the word "trivial." The student of the history of education will, of course, immediately connect the word "trivial," as here used,

¹ *Op. cit.*, i, 516.

² *Narratives of New Netherland*, p. 362.

³ See extracts, pp. 60, 62.

⁴ N. Y. Col. Doc., xiv, 169. The translation here given is O'Callaghan's except that we have put "trivial (*triviale*)" in the place of "public," and "usher" in place of "schoolmaster." The word *hypodidasculus* was a common term to denote a subordinate master in a Latin school. Thus in 1541 at the refounding of the Canterbury Grammar School there were provided a head master (*Archididasculus*) and a "*Hipodidasculus sive secundarius Informator*." The latter must be "*Latine doctus*" and must, "*sub Archididasculo*," teach the boys the elements of the Latin grammar (see page 458 of Leach, *Educational Charters*, Cambridge, 1911). Similarly of the Sherborne (Latin) Grammar School in 1550, we read "*de uno Magistro seu Pedagogo et uno subpedagogo sive hipodidascalo*" (*ib.*, p. 480). Other similar instances are found in the same work, pages 502 (Westminster, 1560), 506, 508, 512. The latest instance noted is in the published "Charter and Statutes of the College of William and Mary in Virginia. In Latin and English" (Williamsburg, 1736), where (pages 87, 91) the assistant in the (Latin) Grammar School is called an usher in English and *hypodidasculus* in Latin. The word *hypodidasculus* is variously spelled, as appears above.

The Lords Directors in the letter quoted above seem to think that an usher would suffice as a "beginning." Later, if the school grew, a rector might be sent.

with the "trivium," which together with the "quadrivium" made up the *seven liberal arts* of the Middle Ages. The trivium consisted of grammar, rhetoric, and logic. Grammar at this time, when all learning was in Latin, included those elementary studies of the school which were designed to give a mastery of that language for the sake of subsequent study. Schools in which such language study was given were called sometimes grammar schools, sometimes trivial schools.

In England during the sixteenth and seventeenth centuries and in the early English colonies of America, the "grammar school" was conducted in the Latin tongue (at least in theory), and was designed to give a practical mastery of the Latin language with some knowledge of the Greek. At the present time in America the expression "grammar school" usually means a school above the primary school and below the high school, in which no language other than English is found, and the grammar of that, even, need not be stressed. As the term grammar school has thus, in America, so widely departed from its original meaning; so in certain parts of Europe, in Austria for example, has the expression "trivial school" come to mean not a Latin grammar school, but the ordinary elementary vernacular school.

If, then, the "trivial school" has *anywhere* gone the way of the "grammar school" in America,¹ the interpretation of the passage at hand becomes a matter of nicer study. Before we can say what Stuyvesant and the Lords Directors intended, we must ascertain the current meaning of the expression "trivial school" in Holland at that time. An exhaustive study of original sources alone could answer our question definitely and finally.

We shall present a number of independent references in the endeavor to fix the meaning of the word. (a) In a dictionary of middle age Latin² under the word trivium we read, *Triviales dicuntur qui docent, vel qui student in Trivio, sicut Quadriviales, qui in Quadrivio*. (They are called "triviales" who either teach or study the *trivium*, and similarly with "quadriviales" and the *quadrivium*.) This reference does nothing more than tend to corroborate what is undisputed, that the name of the trivial school is derived from the trivium. (b) Foster Watson quotes the title of a book by one John Stockwood, which indicates something of the curriculum of the trivial school of England in the early seventeenth century: *Disputatiuncularum Grammaticalium libellus ad puerorum in scholis trivialibus exacuenda ingenia primum excogitatus*, 1607.³ The Latin title and the use of the disputation show that "trivial school" was still for Stock-

¹ See p. 211 below for a similar change in meaning of "trivial school" in America.

² *Glossarium ad scriptores mediae et infimae Latinitatis*. Editio nova. Basiliae, MDCCLXII.

³ *The English Grammar Schools to 1660*, p. 96. Watson elsewhere (p. xxii of *Beginnings of Modern School Subjects*, London, 1909) quotes a 1663 writer who calls Eton, Winchester, and Westminster "trivial schools."

wood fairly close to its original meaning. (c) Bishop Hall (1574-1656) thus uses the word in English:

Whose deep seen skill
Hath three times construed either Flaccus o'er,
And thrice rehearsed them in his trivial floor.¹

The reference to construing Horace shows unmistakably that the bishop's idea of a trivial school included Latin. (d) The Synod of Dort (1619) presented to the States General a petition that "some general rules for the government" of the "trivial or inferior schools" might be drawn up in order that a "uniform method of teaching be established, especially in the principles of grammar, logic, and rhetoric."² Here we have the three studies of the old trivium still holding sway. (e) The particular Synod of South Holland meeting in Dort, 1627, discussed whether it was advisable that the elements of Hebrew be taught in the trivial schools (*in scholis trivialibus fundamenta Hebraicae linguae*).³ Evidently no one would think of putting Hebrew into anything less than a Latin grammar school. (f) In 1634 the same synod discussed the inquiry of a *rector scholæ trivialis* as to whether the pupils should, as a school exercise, present comedies.⁴ Here two things indicate a Latin school, the use of the word *rector* and the reference to the presentation of the classic comedies, as of Terence, for example. (g) In the minutes of the same synod from 1634 to 1637 are three other references to *rector scholæ trivialis*, and one to *rectoren in triviale schoolen*.⁵ (h) At Utrecht from a very early date was a city school called the St. Jerome School. During the seventeenth century it was of the gymnasium type, being sometimes called the "Jerome Gymnasium." It had eight classes, and, as was common with the schools of the kind, forbade the pupils to "speak Dutch."⁶ In the instructions issued by the common council this school is in 1634 referred to as "the aforesaid trivial school called the Jerome (Hieronimi) School," and again in 1640 as "the trivial or Jerome (Hieronimi) School."⁷ Two clear cases in which "trivial school" was equivalent to "gymnasium." (i) Douma, writing of Holland in the seventeenth century, speaks of "the triviale or Latin schools (*de triviale* or *Latynsche scholen*), which were found in nearly all of the cities" of Holland, saying: "These schools were not always higher (*boven*) than the ordinary elementary school, but for the most part stood on the same level as (*naast*) the

¹ Satires IV, i, 173. (Quoted in Century Dictionary under *Trivial*.)

² Brandt, History of the Reformation, iii, 326. The Dutch original says "de triviale schoolen;" quoted from Wilten's *Kerkelijk Plakaet boek* (i, 144) by Woltjer, *op. cit.*, p. 76.

³ Acta, etc., i, 220.

⁴ Acta, etc., ii, 32.

⁵ *Ibid.*, pp. 30, 65, 97, 132.

⁶ Van Flensburg, *op. cit.*, vii, 370, 381, 383.

⁷ *Ibid.*, pp. 368, 376.

latter * * *. The pupils were often admitted in their eighth year." He refers to *Leges Scholæ Leovardiensis* (1638, reprinted 1701) as typical. In these we have: "On the whole no pupils were admitted who did not know how to read; declining and conjugating are the chief subjects, and then come explanations of passages from Latin and Greek authors."¹ So far everything seems to point to the use of the word trivial to indicate a Latin school.²

That in Holland no change had come in the signification of the word even as late as the middle of the eighteenth century seems to be indicated in the following extract from a letter read in the Classis of Amsterdam in 1751. It tells of the education of an applicant for ordination to the ministry.

"He in order to have him study Latin and Greek, had placed him in the trivial school at Utrecht, with the co-rector there, until the time that he should publicly graduate. Subsequently he was placed at the house of Rev. Peter Wynstok at Harderwyk, in September, 1736."³

These references seem to show clearly that the seventeenth century school was a Latin school, probably attended not only by boys in their teens, as in our present American Latin schools, but quite as likely by boys from 8 years of age and upward. This, then, is what we should naturally and normally understand to be the school contemplated by Stuyvesant and the Lords Directors in 1652.

Let us now examine the general situation for confirmation or contradiction. Even a casual reading of the letter of the directors, as given above, makes it clear that some new kind of school had been recommended by Stuyvesant and accepted by the Lords Directors. It was yet to be "established," and "a beginning might be made with one schoolmaster." Clearly the elementary school of which Vestensz had charge was not a *triviale school*, else some such word as "other" or "second" would have been used in connection with the proposed school.

Thus since the original trivial school of the Middle Ages was undoubtedly conducted in Latin exclusively for instruction in grammar, etc., since all the accessible contemporary records indicate substantially a continuance of the same instruction, since the eighteenth century reference explicitly asserts that Latin was then taught in the Utrecht trivial school, and since the only pertinent document is otherwise unintelligible, we seem not only authorized, but compelled, with the present lights before us, to conclude that this 1652 school in New Amsterdam was an elementary Latin school designed probably to

¹ *Op. cit.*, pp. 94, 95.

² Other references pointing in the same direction are found in Buddingh, *op. cit.*, pp. 27, 37, 38, 93; *Monumenta Germaniæ Pedagogicæ*, vol. 2, pp. 116, 374, 377, 381, 388, 621; *ibid.*, vol. 38, pp. 68, 241; *ibid.*, vol. 41, pp. 34-5. Reltsma and Van Veen, *op. cit.*, vii, 237-238.

³ *Eccles. Rec.*, p. 3182. This is almost certainly the Jerome School above referred to

teach the rudiments of that language to the boys of the more aristocratically conditioned of the New Amsterdam settlers.

Of the subsequent history of the school thus provided we know next to nothing. That it was actually established, we presume from the following council minute of date December 9, 1652:

On the petition of Jan Monjoer de la Montagne, director general and council order the receiver general, Cornelis van Tienhoven, to pay the petitioner three or four months wages.¹

Should any object that "three or four months" is not enough to bridge over the gap between April 4th (the date of the letter authorizing the school) and December 9th (the date of the minute), the answer appears easy. The letter might take a month or two, or even more to arrive. Another month might be required to put the school into operation. The indefiniteness of "three or four months wages" sounds as if the authorities did not care to keep exactly abreast of their accounts. In short, in view of what has gone before, and in the absence of any other known reason why the younger Montagne should receive wages, the coincidences are so great as practically to compel belief that the school was begun and that it did continue for at least "three or four months." How much longer the school continued can not be stated. As Montagne left for Holland in the summer of 1654, we have no difficulty in concluding that the school did not last longer than two years, at the most.²

That the "city tavern" housed this school may well be true, though there is no evidence other than the letter quoted. Later, this building became the stadhuys or city hall. There is good reason to suppose that in 1652-53, it was not used as a tavern, but had become a public storehouse for old lumber and a lodging house for chance unfortunates.³ Certainly the evidence does not warrant the slur sometimes cast that New Amsterdam schools were kept in taphouses.

The establishment of the next Latin school was due to the persistence of one of the ministers, Domine Drisius, who—as the Lords Directors wrote to Stuyvesant (1658)—"has repeatedly expressed to us his opinion that he thought it advisable to establish there a Latin school."⁴ The Lords Directors further said they had "no objection to this project * * * but you must not fail to inform us how such an institution can be managed to the best advantage of the community and kept up with the least expense to the company." (The Lords Directors always expected Stuyvesant to report on details and keep down expenses.)

Domine Drisius, as we may well believe, also stirred up the city fathers. At any rate, on September 19 of the same year, the burgo-

¹ N. Y. Col. MSS., v, 95.

² Riker's History of Harlem, p. 786.

³ See Rec. of N. A., I, 146, 219, 291-2, 308.

⁴ N. Y. Col. Doc., xlv, 419.

masters and schepens petitioned the Lords Directors in behalf of the proposed school: "The burghers and inhabitants are inclined to have their children instructed in the useful languages, the chief of which is the Latin tongue." The nearest such school is "at Boston, in New England, a great distance from here." The petitioners further state their belief that if a suitable master be sent, "many of the neighboring places would send their children hither to be instructed." They hoped that the school thus established "increasing from year to year" might "finally attain to an academy [university], whereby this place arriving at great splendor, your honors shall have the reward and praise next to God the Lord." They close by saying, "on your honors sending us a schoolmaster we shall endeavor to have constructed a suitable place or school."¹ This last clause fits well with the practice before seen of the city's furnishing the school building. The Lords Directors wrote, February 15, 1659, that "the arguments brought forward * * * have induced us to decide" that "a fit and honest man" shall be sent "to instruct the children in the elements and foundations of the [Latin] language," care being taken that he writes a good hand, to teach the children calligraphy."²

The following extract from the minutes of the Amsterdam Chamber shows in detail the selection of the rector for the school, his salary, the custom of furnishing the books, the "gratuity" and how it was profitably invested, and permission to give private instructions. The reference to the garden or orchard is probably in view of the fact that D^r Curtius was a physician, and needed a herbarium.

Thursday, the 10th of April, 1659.

Before the board appeared Alexander Carolus Curtius, late professor in Lithuania, mentioned in former minutes, who offered his services. After a vote had been taken he was engaged as Latin schoolmaster in New Netherland at a yearly salary of 500 fl., of which one-quarter shall be paid to him in advance, that he may procure what books he requires. The board further grants him a gratuity of 100 fl., which the company will lay out in available merchandise to be used by him upon his arrival in New Netherland, where a piece of land convenient for a garden or orchard shall be allotted to him by the director general. He shall also be allowed to give private instructions, as far as this can be done without prejudice to duties for which he is engaged.³

The new master sailed in the *Bever* on April 25, but "the books required by the schoolmaster now coming over for the instruction of the young people in Latin could not be procured in the short time before the sailing of these ships. They will be sent by the next opportunity."⁴

Curtius arrived, opened his school, and afterwards appeared before the burgomasters on July 4. He was "informed that 200 fl. are allowed him as a yearly present from the city; an order on the treasurer is also handed him for fl. 50, over and above." From this distance the court seems generous; but Curtius was not easily pleased.

¹ Rec. of N. A., iii, 15-6.

² N. Y. Col. Doc., xlv, 430.

³ *Ibid.*, p. 437.

"He thankfully accepts, but requests as he has but few scholars as yet that his salary may be somewhat increased, as the beginning entails great expense, saying whenever he gets 25 to 30 children to the school he shall serve for less salary."¹

We note then that the city authorities gave a part of the salary, not quite half as much as the company. Curtius was evidently interested in the financial aspect of his position. Just six weeks later Stuyvesant writes to Holland that "Curtius complains of his salary." He asks "whether a reasonable sum may not be granted to him for board money." Stuyvesant bears cordial testimony to Curtius's success; "as to his services and diligence we must truly testify that his industry is astonishing and the progress of the young people remarkable." Stuyvesant further asks "whether it is not possible to receive by somebody's recommendation and intervention from the Botanical Garden at Leyden some medicinal seeds and plants."²

The Lords Directors promised to send "the medicinal seeds," and the following April (1660) they were sent. Their purposes are sufficiently explained in the following extract:

As we are told that Rector Curtius practices medicine there, and therefore asked to have a herbarium sent to him, we have been willing to provide him with one herewith. You will hand it to him with the understanding that it shall not cease to be property of the company.³

From January to September we find the Domine Rector Alexander Carolus Curtius engaged in a suit at law about the purchase price of a hog. Neither party to the suit had been present at the sale, each acting through an agent. On January 13 the case was called: "Defendant Alexander in default. Plaintiff demands benefit of the default." The court overruled. "Daniel Tourneur appearing, declares to have sold a hog for Capt. Jacob to Alexander Carolus Curtius for five beavers—two beavers down and the remaining three at the end of the month."⁴ At the next session, January 20: "Defendant offers an exception as not being amenable before this court, but before the director general and council." The court overruled. The domine's agent, Jan Schryver, then testifies that the hog was purchased for "two beavers and two blankets." The court orders "both sides to summon their witnesses against the next court to confront them with each other."⁵

It is three weeks before the next entry. Curtius appears with his witnesses. Schryver repeats his testimony, "offering to confirm the same on oath." "Capt. Jacob is ordered to summon Daniel Tourneau at the next court day."⁶ A week later both sides are present. "Daniel Tourneau declares that after many words of

¹ Rec. of N. A., vii, 223-4.

² N. Y. Col. Doc., xiv., 445.

³ *Ibid.*, p. 462.

⁴ Rec. of N. A., iii, 98-9.

⁵ *Ibid.*, p. 103.

⁶ *Ibid.*, p. 128.

praising and bidding the hog was sold to Dom^e Rector for five beavers, saying that Capt. Jacob would not sell that hog for less than five beavers, which was told to the rector; to which the rector answered—saying, in God's name he had but two beavers and he must wait for the other three, to which Capt. Jacob would hardly agree; finally, through the mediation of Joannes van der Meulen, he let himself be persuaded, offering to confirm the same on oath. Jan Schyver declares that Dom^e Rector bought the hog for two blankets and two beavers; offering also to confirm the same on oath. The court gave parties eight days respite to recollect themselves, and if they have any proof to bring it also in."¹ After this Curtius seems to have avoided the issue, and apparently the case was allowed to "rock along." On June 1, and again on August 24, the defendant was "in default." But on the latter date both witnesses were present and both offered to "confirm their declaration by oath." For some reason not made clear the court tendered the oath to Daniel Tourneur, who having taken the same, "the defendant was condemned to pay the plaintiff the five beavers, which he promised for the hog in question." Apparently we have in this legal proceeding some trace of the old compurgation. One wonders why that other witness was not allowed to swear. Possibly he "backed down" at the last moment. On the 7th of September appears the closing entry. Curtius acknowledged the judgment, "saying for this time he submits to the same."²

That Curtius was "out for the almighty dollar," even at that early day, has already been made evident. We noted that when an out and out present of 250 guilders was given him, he asked that it be made larger. We saw six weeks later his request to Stuyvesant and the directors for an increased salary from the company. Not only did he ask for more salary from his school, but he practiced medicine on the side; and besides, in the judgment of the court, tried to cheat at a hog trade. And even more, he objected to paying the excise, claiming that "whereas professors, preachers, and rectors are exempt from excise in Holland," he should be exempt here. He further claimed that "the director general has granted him free excise." But in this matter again he lost; "the court decided that the D^e Rector shall pay the excise."³

Nor was this all. During the continuance of the suit about the hog, it came to the ears of the burgomasters "that the rector of his own pleasure takes one beaver [eight guilders] per quarter from each boy, which is contrary to the order" "that he should take six guilders per quarter school money for each boy." The burgomasters thereupon gave him "warning and notice not to take any more than what is fixed upon by the honorable director general and burgomas-

¹ Rec. of N. A., III, 133.

² *Ibid.*, p. 201.

³ *Ibid.*, p. 263.

ters, or through neglect thereof burgomasters will retain his yearly stipend which the rector receives from this city."¹ But this threat did not stop the practice. Some six months later he was brought before the burgomasters again on the same charge. This time he defended himself, saying that "at the beginning of school the parents of his pupils came to him urging him to teach the children well, which he promised to do and has done more than usual, but he must also have more than was allowed, for which they have promised him one beaver."² What the court this time decided, we do not know, but he was soon after compelled to give up his place.

In this connection the question of the rector's income from the school naturally arises. The first year, exclusive of tuition, he received 850 guilders from the company and the city together. Of this, however, only 700 guilders continued to succeeding years. His tuition can hardly be estimated directly with any certainty; but a court record of July 12, 1661, affords an indirect basis of approximation. On the day named he asked the burgomasters and schepens whether the city would "contribute to him 600 guilders a year in beavers on condition of [his] receiving no contribution from the youth."³ He had already been receiving 200 guilders from the city, so that he could hardly have been getting more than 400 guilders in tuition fees, else he would not offer for 600 guilders. If we add 400 guilders tuition money to the salary as given above, we have some 1,250 guilders as the maximum income from the school.⁴ That this is considerably more than the elementary master received need not surprise us. The rector of a Latin school was on a distinctly higher plane, much more nearly equal to the position of the clergyman.

This tuition income enables us to approximate the number of pupils in average attendance. The school, we may believe, was in session four quarters. This would mean an average income from tuition fees of 100 guilders per quarter, which at the legal rate of tuition fees would have meant a paying average of some 17 pupils. Evidently his expressed hope of 25 or 30 pupils was never realized. Aegidius Luyck, who succeeded Curtius, had at one time an enrollment of 20, with 10 or 12 more expected. We may conclude that 20 or 25 is probably as high a figure as Curtius's enrollment ever attained.

Concerning the success which attended the efforts of D^r Curtius, we are compelled to chronicle an apparent decline during his term of service. At first all went well. Shortly after the school was

¹ Rec. of N. A., vii, 257.

² Minutes of the Orphan Masters, etc., ii, 76.

³ Rec. of N. A., iii, 344.

⁴ In this discussion nothing has been said of the vexed question of two kinds of currency, provincial and Hollands.

begun; Stuyvesant wrote: "As to his services and diligence, we must truly testify that his industry is astonishing and the progress of the young people remarkable." Curtius himself told the burgomasters that he had "done more than usual." His fame seems to have spread to the South River (Delaware), for the vice-director there wrote (Mar. 15, 1660) to Stuyvesant: "I kindly request that your honor will permit me, when an opportunity is offered, to visit the Mannhattans in May or June. I intend to bring my two oldest boys to school."¹ But this early success was not maintained. The burgomasters were informed that D^r Curtius "does not keep strict discipline over the boys in his school, who fight among themselves and tear the clothes from each other's bodies, which he should prevent or punish." His reply, it must be confessed, belongs to the universal brotherhood of teachers: "Concerning the discipline he says his hands are bound, as some people do not wish to have their children punished, and he requests that the burgomasters would make a rule or law for the school."²

The career of Curtius in New Amsterdam ended a few months after this appearance before the burgomasters. The Lords Directors took the matter into their own hands and dismissed him, whether for incompetence or on account of his contumacy to the burgomasters does not appear. That he did not leave of his own accord seems evident from Stuyvesant's letter: "What Alexander Carolus Curtius, the rector or Latin schoolmaster, dismissed by your honors, has remonstrated and requested of us on his departure, your honors can deduce from his annexed petition."³ If only we had the records of the West India Company and could see this petition, our curiosity as to what he remonstrated might be satisfied; but as matters now are this is the last known of D^r Curtius. His term of service extended, apparently, for just two years, from July, 1659, to July, 1661.

We may call attention to the fact that this Latin school was controlled and supported in much the same way as was the elementary school of New Amsterdam. The company paid the salary for the most part, while the burgomasters supplemented this and furnished the schoolhouse.⁴ Tuition was charged at rates "fixed upon by the honorable director general and burgomasters." In general, the school was looked upon as a city school, and as such was regulated by the burgomasters of the city.

¹ Pratt, *op. cit.*, p. 24. Vice Director Beekman could not have wished to move his boys from Evert Pietersen's elementary school in order to place them under Hoboken. Pietersen was admittedly the better man.

² Administrative Minutes, Feb. 25, 1661. (Minutes of the Orphan Masters, II, 76.)

³ Pratt, *op. cit.*, p. 27.

⁴ We saw that the city promised to "endeavor to have constructed a suitable place or school." That it did so appears from Curtius's statement to the burgomasters, when his discipline was under review, that "It is also necessary that his school (house) should be enlarged."

After the dismissal of Curtius the Latin school lapsed for nearly a year. In February of 1662, Domine Aegidius Luyck, "S. S. Ministerii Candidatus," aged about 21, sailed from New Amstel, "called for the private instruction of the director general's children."¹ He proved very acceptable to Stuyvesant on account of his "good method of inculcating the first principles of the Latin and Greek languages, as in writing, arithmetic, catechizing, and *honorum morum praxis*."² The success of the young ministerial student becoming known, plans were made to employ "him in the *Rectoratum* of this city," the place previously occupied by Curtius. The director general and council recommended the scheme to the Lords Directors, and the burgomasters likewise wrote requesting that it be carried out. Relying on the basis of the precedent set by the Lords Directors in the case of Curtius, and influenced by the appeals now made, Stuyvesant "deemed it proper," in D^r Luyck's own words, "to employ me for this end, promising that he would advise and recommend to the Lords Directors that a salary might be allowed me." Accordingly in May, 1662, the provisionally appointed rector took up the work of the New Amsterdam Latin School laid down by Curtius some 10 months before. Stuyvesant said of Luyck's efforts, they "far excel the instructions of the late rector, Alexander Carolus Curtius, as will be testified by the ministers of the holy word of God and other competent judges."³

The question of salary was to be determined when the Lords Directors should announce their pleasure.⁴ "With this looking forward I remained satisfied," says Luyck, "returned to my school, and exerted every nerve so that the number of my pupils was increased to twenty, among whom were two from Virginia and two from Fort Orange, and ten or twelve more from the two aforesaid places were expected, while others were intending to board with me."⁴

When the Lords Directors neglected to make known their decision, Luyck petitioned to the director general and council, July 30, 1663, for a salary. Stuyvesant favored the request, but for some reason the council declined to act, still referring Luyck to the Lords Directors. The young domine turned in distress to his noble patron, from whom he received a most characteristic reply: "My advice on the request of the Rev. Aegidius Luyck is that I condescend to acquiesce in the majority of votes." He was nevertheless of opinion "that the instruction of the youth with well-regulated schools is not less serviceable or less required than even church service," and closed the letter by telling Luyck that "he ought to enjoy the quality and salary which

¹ N. Y. Col. Doc., II, 469, xII, 361; Pratt, *op. cit.*, p. 32.

² Pratt, *op. cit.*, p. 33.

³ *Ibid.*, p. 33-4.

⁴ *Ibid.* The date of beginning is fixed by a statement of Stuyvesant's made August 9, 1663, that the school had then been in operation "during five quarters of a year."

the Lords Directors granted to the first Latin master, Alexander Carolus Curtius."¹ Shortly after this Luyck received letters "from his father and mother, showing that the proposal of the director general should be answered, and that the transactions of the director general in this case were approved." He thereupon renewed "his humble request that it may please your honors to appoint and confirm the supplicant, either absolutely or provisionally, in the solicited *Rectorate*, with the ordinary salary." If they were not willing to do this, he asked permission "to go with the vessels now lying ready to sail on a short trip, under God's guidance, to the Fatherland, to solicit there in person—the desired appointment with the salary annexed to it. As the common proverb says, 'No better messenger than the man himself.'"²

A petition on the same day from the burgomasters "to the noble, great, and respected director general and council in New Netherland" that the latter should grant D^r Luyck "such a salary as your honors in their wisdom and discretion shall deem proper," is too opportune to be accidental. The two petitions accomplished the desired end. The action of the council and the accompanying action of the burgomasters were as follows:

The director general and council are, with the supplicants, of the opinion that the continuation and encouragement of the Latin school is necessary—and, as it is customary in our Fatherland, that such persons by the cities which make use of them are engaged, so are the supplicants authorized by this, to allow such a salary to the aforesaid Rev. Luyck as they shall deem reasonable—of which salary director general and council provisionally upon the approbation of the noble directors shall pay the half. 16th August, 1663.

NOTE.—In virtue of this authorization the burgomasters agreed with the Rev. Aegidius Luyck that he shall receive annually in seewant (wampum) at 8f. for a st., a thousand gl., of which the company shall pay the half.³

The salary here voted to Luyck is not quite what Curtius had received. Seewant money or wampum at this time had only half the value of coin, so the "thousand gl." thus voted was only 500 guilders, Hollands. Curtius, we saw, received 500 guilders, Hollands, from the company and 200 guilders from the city. It seems probable that this latter was reckoned in wampum. If so, Luyck's 500 guilders, Hollands, is to be compared with Curtius' 600 guilders of the same basis. It is to be noted, moreover, that this salary was voted provisionally upon ratification of the Lords Directors. But since the company's share of Luyck's salary, as promised by Stuyvesant, was only 250 guilders—just half what Curtius had received from that source—we need not doubt that the Lords Directors approved; and it is quite possible that they authorized an appropriation more nearly equal to that of Curtius. That Luyck charged

¹ Pratt, *op. cit.*, p. 33-34.

² *Ibid.*, p. 34.

³ *Ibid.*, p. 35.

tuition we could have concluded from the general custom, even if we had no explicit statement to that effect.

Few subsequent records of Luyck's work in the Latin school remain. He was married "the second day of Christmas," 1663, to Judith van Isendoorn. Domine Selyns, on the occasion, wrote two poems, the title of one of which shows Luyck's continued service in the Latin school. "Bridal torch for Rev. Aegidius Luyck, rector of the Latin school at New Amsterdam, and Judith Van Isendoorn, lighted shortly after the Esopus murder committed at Wiltwyck, in New Netherland, by the Indians, in the year 1663."¹ In February of the succeeding year Luyck contributed 200 florins to the defense of the city. Pietersen contributed 100, while Stuyvesant contributed 1,000. At the taking of New Amsterdam by the English in September of 1664 Luyck was present and apparently furnished aid in defense of the city.² A month later he took the oath of allegiance to the English.³ In May, 1665, he left with Stuyvesant for the Fatherland.⁴ On October 22, 1665, he signs a statement as "Aegidius Luyck, late rector of the Latin school in New Amsterdam."⁵ It seems clear that Luyck continued at the head of the Latin school until the English occupation. Whether he continued after that, as did Pietersen we can not say. Since there is no petition on his part for a salary from the city, as there is in the case of Pietersen, the probabilities would seem to be against it. At any rate his teaching career in America came to an end not later than May of 1665, for at that time he departed for Holland. Some, indeed, have said that he maintained his school continuously until the second English occupation in 1674, but the evidence against this is conclusive. After Luyck's return to Holland, he resumed his study for the ministry, and was in September of 1666 "received as recommended" for ordination by the Classis of Amsterdam.⁶ About a year later (August, 1667) he expressed to the classis his intention of returning to New York, and asked permission to be ordained "in that land if opportunity offered."⁷ He did subsequently come to New York, but probably not until after June 5, 1670, for at that time we find our old friend, Evert Pietersen, reading the sermons when D^r Drisius was not well enough to preach.⁸ Since D^r Luyck served in 1671-72 as a supply for D^r Drisius, we can then feel sure that Pietersen would not have acted in this capacity had Luyck been in the city at the time.

In March of 1671 we learn that "Domine Luyck by reason of y^e weakness of Domine Drisius now several tymes hath taught y^e

¹ For both poems and English translations, see Murphy's Anthology, p. 137.

² N. Y. Col. Doc., II, 469.

³ *Ibid.*, III, 76.

⁴ *Ibid.*, II, 470-1.

⁵ *Ibid.*, II, 469.

⁶ Eccl. Rec., p. 582.

⁷ *Ibid.*, p. 589.

⁸ *Ibid.*, p. 610.

word of God, with good satisfaction to this Court and y^e Inhabitants of this City;" and it was "agreed upon that from henceforth on Sabbath days y^e Word of God should be taught in y^e forenoon by Domine Drisius and in y^e afternoone by y^e said Domine Luyck."¹

During this time he is referred to as "Aegidius Luyck, Merchant," and he is stated to have owned "one-sixteenth part of the ship Good Fame of New York."² After a year of service as assistant to D^r Drisius, the court allowed him "by way of gratuity—the sum of 400 guilders seewant."³ A reference in September, 1672, shows his continued stay in the city.⁴ In 1673, when the Dutch retook New York, he was nominated as schepen of the city, but was chosen by Governor Colve as burgomaster.⁵ In this capacity he served on several important commissions, and at the same time acted as captain in the militia.⁶ During this brief rule of the Dutch there was compiled "a valuation of the best and most affluent inhabitants of this city," 62 names in all. The average wealth of these was 8,400 guilders, Luyck was assessed at 5,000 guilders, and Pietersen at 2,000. The median of list was between 4,000 and 5,000.⁷ Whether Luyck attained his position of "affluence" by inheritance, by marriage, from his Latin school, or by his merchandise, we can not say. We will not suggest that he used improperly his positions as "commissary of provisions" and "receiver of confiscated property;" though at a much later date the coincidence of wealth and two such positions in the case of a whilom schoolmaster, might lead to such suspicions.

When the English came the second time, "Mynheer Domine, burgomaster and captain," got into trouble over the oath of allegiance; and apparently his property was in turn confiscated.⁸ He left New York in May,⁹ 1676, and his name no more appears in the records.

As to the school itself thus conducted by Curtius and Luyck there is little to add. Internally it was most probably as exact a reproduction of the schools in the Fatherland as conditions in New Netherland would allow. The textbooks used may be assumed with some probability from the following list sent by the East India Company some 10 years before (1653) to a similar school in one of their eastern possessions:

¹ Rec. of N. A., vi, 292.

² Second Annual Report of the State Historian of N. Y., p. 313.

³ Rec. of N. A., vi, 365.

⁴ Second Annual Report of State Historian of N. Y., p. 361.

⁵ Rec. of N. A., vi, 396, 398.

⁶ N. Y. Col. Doc., II, 602, 625, 631, 638, 644, 670, 685.

⁷ *Ibid.*, pp. 699-700.

⁸ Third Annual Report of the State Historian of N. Y., pp. 283, 335, 286, 344, 383, 385, 396-397, 401, 404, 412, 430-431.

⁹ Eccl. Rec., p. 686.

2 Calepini dictionaria octo linguarum; 12 Florilegia Langii; 12 Apophthegmata et Similia Lycosthenis; 12 Progymnasmata Aphthonii; 20 Prosodiæ Smetii; 20 Thesauri poetici; 12 Psalterii Buchanani.¹

The support and control of this school was much the same as of the New Amsterdam elementary school, the main difference being that no ecclesiastical body is mentioned so much as once in connection with the selection or certification of either Latin master. Another difference was that while the city seemed not to give the elementary master any stipend other than house rent, in the case of both Curtius and Luyck, the burgomasters furnished a good portion of the salary.

It is pleasing to see in the records references to the "renown and glory" which should come to the city from the possession of "well-regulated" schools. Stuyvesant considered these "not less serviceable or less required than even church service." The authorities had high hopes for their Latin school; but a hostile nation intervened before the city could reach "the great splendor" of seeing the Latin school "attain to an university."

¹ Acta der Part. Synoden van Zuld-Holland, III, 374. From a footnote on the page noted we present the following:

The first book on the list had originally been published in 1502 at Reggio. The edition here used was probably of Paris (1609) or of Lyons (1634). The eight languages were Latin, Hebrew, Greek, French, Italian, Spanish, and English. The full title of the second was Joseph Langius, *Anthologia seu florilegium locorum communium*. The third on the list was Conr. Lycosthenes, *Apophthegmata ex probatis Græcæ Latinæque linguæ scriptoribus*, Cadomi, 1610 (for a description, see Foster Watson, English Grammar Schools, p. 425-426). The next was published in Leiden in 1628 and at Amsterdam in 1642. Of the fifth and sixth nothing can be added. The full title of the last was George Buchanan, *Paraphrasis Psalmorum Davidis poetica*. First edition Antwerp, 1582.

CHAPTER VII.

THE PRIVATE SCHOOLMASTERS OF NEW NETHERLAND.

Reserving for the moment the discussion of the formal private schools, attention may be called to two known cases of private tutors. One of these, Aegidius Luyck, has already been discussed at length in the preceding chapter, where it was pointed out that he was "called for the private instruction of the director general's children," and that he taught them "the first principles of the Latin and Greek languages, writing, arithmetic, catechizing, and *honorum morum praxis*."

The second tutor, Jacques Cortelyou, is perhaps a more important personage than Aegidius Luyck. He was the first settler and early patron of the village of New Utrecht and the founder of the well-known Cortelyou family of this State. Cortelyou came over to America about 1652, apparently in order to serve as "tutor to the son of the Hon. Mr. Werckhoven." Unfortunately we know nothing of his teaching career other than the bare facts above stated; but his contemporaries have left numerous comments upon the man himself. D^r van Zuuren, of Long Island, for instance, submitted a disputed salary case to Cortelyou when he was "the justice of New Utrecht," remarking in connection that "he, although not of our religion, is a man of good understanding, especially in philosophy and in the mathematics of Descartes."¹ Dankers and Sluyter, those eccentric religious enthusiasts, say of him "he had studied philosophy in his youth, and spoke Latin and good French. He was a mathematician and sworn land surveyor. He had also formerly learned several sciences, and had some knowledge of medicine. The worst of it was he was a good Cartesian and not a good Christian, regulating himself and all externals by reason and justice only."² Many evidently even in more favored times have had tutors less learned and less capable than had Van Werckhoven in this Jacques Cortelyou.

The fact that dame schools were common in Holland at the time of American colonization should lead us to expect their presence in New Netherland, and they may have been here, but no case has appeared during the Dutch period, and very few among the Dutch during the English régime.³ If Stuyvesant included dame schools under his regulations governing private schools, later to be discussed, we might

¹ Eccl. Rec., p. 718.

² Long Island Hist. Soc. Pub., i, 128.

³ See pp. 173, 187, 189.

say that the silence of the records indicates that no dame taught school in New Amsterdam. However, it seems somewhat doubtful that the authorities would be as strict with an old woman teaching in her kitchen—such was the custom with school dames—as with a more pretentious school. This consideration and the fragmentary character of the council records forbid one's placing much reliance upon the argument from silence. A confession of discreet ignorance seems the wisest course. The only assertion to be made is that, if there were dame schools in New Netherland, no trace of them has come down to us.

If we know nothing of school dames in New Netherland, it is quite otherwise with private schoolmasters. There is no probability that all who taught privately have left traces in the records; but enough is known of a few to add an interesting if short chapter to the history of Dutch education in America.¹ The first certain reference is of date 1649, when "the worthy Adriaen Jansen van Ilpendam, at present schoolmaster here on the island of Manhattan," executed a legal paper before the official notary.² Since there is no evidence tending to connect this Van Ilpendam with the official school on Manhattan, we infer that he was a private master, and suppose that he was one of the schoolmasters mentioned by Tienhoven in his rejoinder to the Remonstrance (about 1649–1650): "The other schoolmasters keep school in hired houses, so that the youth, considering the circumstances of the country, are not in want of schools."³ Beyond this we have found nothing regarding Ilpendam's school keeping on Manhattan. In 1651 he had a school in Beverwyck (Albany), where his further career will be treated.⁴

David Provoost, sr., was a prominent citizen of New Amsterdam, where he lived from about 1641 to about 1656. He died in the last-named year, apparently on Long Island. Quite possibly Provoost taught for many years on Manhattan, and likely enough was also one of Tienhoven's masters who kept school in "hired houses." The baptism records of the New Amsterdam Church give the names of children of "M^r David Provoost" baptized in 1645 and 1646.⁵ The title "M^r" under the circumstances almost certainly means that he was teaching as early as 1645. Our first explicit reference to his school, however, is in a council minute of February 12, 1652, when the heretical Anna Smits was directed by the director general and council

¹ A good résumé of the private schoolmasters of New Netherland, trustworthy on the whole, is found in Pratt's *Annals*, pp. 51–55. Valentine's discussion in the *Corporation Manual* of 1863 is, unfortunately, not reliable.

² N. Y. Col. MSS., iii, 60.

³ *Narratives of New Netherland*, p. 362. The translation here used is Mr. Van Laer's amending of Prof. Jameson's.

⁴ See p. 120.

⁵ N. Y. Gen. and Bio. Soc. Coll., ii, 19, 20.

to "appear on the following Wednesday at the school of David Provoost, where the nine men usually met."¹

Two years later Provoost brought suit against Joost Carelsen for school money, the record of which we give in full in order that the reader may for himself correct an error of O'Callaghan's in including Carelsen among the private schoolmasters of New Amsterdam.²

City Hall, Monday, August 24, 1654.

David Provoost, pltf., v/s. Joost Carelsen, deft., demands payment of fl. 8 for school money. Deft. confesses the debt, but says that Michael Poulisen deducted the same from his rent and he thought all along that it had been paid. Parties being heard, deft. is condemned to pay pltf.³

City Hall, Monday, August 31, 1654.

Joost Carelsen, pltf., v/s. Mary d'Karman, deft., demands payment of fl. 8, which he is condemned to pay D. Provoost and which is deducted from his rent. Deft. says she paid pltf. his rent in full according to receipt, and that she paid D. Provoost 8 gl. school money herself in the presence of pltf. The court orders that parties shall appear before the board on the next court day, with D. Provoost, senior, in order to be heard on the premises.⁴

It is quite evident from this that Joost Carelsen was a patron (delinquent at that), and not a schoolmaster. As no other reference connects Carelsen with the schoolroom, we must conclude that O'Callaghan read carelessly the records of the case in court.

It may be asked whether the 8 fl., for which Provoost sued, represented a year's tuition for one child. This is not asserted in the records, and the probabilities are against it. Reducing this to the same basis as Pietersen's tuition schedule, fl. 8 a year would mean only 40 stivers a quarter, which is less than the average rate allowed to Pietersen, who had besides a fixed salary that probably furnished much the larger part of his remuneration. Furthermore, at Albany in 1660, we find Van Ilpendam charging "two beavers (i. e., 16 fl.) for one year's school money." We can not agree then that we have in the "8 fl. for school money" any information as to the rate of tuition charged by Provoost. We may note in concluding with Provoost that his general standing in the community speaks rather well for the position of private master.

In the council minutes of September 2, 1652, we find:

On the petition of Hans Steyn, soliciting permission to teach school—granted.⁵

There was a Hans Steen, a corporal, condemned in 1639 for improper conduct "to ride three hours on the wooden horse and do duty as a soldier during fourteen days." Another Hans Steyn in 1638 was a midshipman. Probably neither of these was the teacher. Apparently the man to whom the license was issued continued to live in

¹ N. Y. Col. Doc., xlv, 156.

² Register of New Netherland, p. 120.

³ Rec. of N. A., i, 230.

⁴ *Ibid.*, pp. 234-5.

⁵ Pratt, *op. cit.*, p. 53.

New Amsterdam until about 1666.¹ We know nothing else of his teaching.

Andries Hudde held many offices in New Netherland during nearly the whole Dutch occupation. His request for license is interesting on account of the answer returned.

Andries Hudde appeared before the director general and council and solicited a license to keep school, received for answer that the council shall ask upon his proposal the opinion of the minister and the consistory. Done in New Amsterdam, 31 December, 1654.²

Just why the opinion of the minister and consistory should be asked is not clear. If the ministers only had been named, we could easily suppose that they had been appealed to as expert judges of educational qualifications. But the opinion of the consistory in this regard could add nothing. When we take into account the ecclesiastical hatred of heretical teachers common in Holland, and Stuyvesant's fanatical zeal against heretical sects, we are inclined to wonder whether suspicion may not have rested on Hudde's orthodoxy. Some such question as this seems the most probable consideration which could prompt the director general and council to ask the opinion of the minister and consistory. That Hudde should have wished to teach is strange considering his many business concerns. Whether his request was granted we can not say, as this is the only known thing connecting him also with school keeping.

The basis on which the name of Frans Claessen is included among the private masters has not hitherto been presented to the reading public. The record is interesting not only historically but also as showing that even a Dutch schoolmaster had a very human side.

On Monday, June 26, 1656, Jan Vinje, who lived apparently next door to Claessen, brought suit against his neighbor for damage to his growing garden, saying that he "found last Saturday, deft.'s son with three or four other school boys among his peas and corn," where "they did much damage * * * by their footprints." He further stated that he had spoken to Claessen about the matter; but that the latter proved "obstinate" and gave him "much abusive talk." Claessen told the court that he was "ignorant that his son and school mates had been in pltf. corn, or had done any damage there." He further stated that Vinje had "beat his son with a stick black and blue." Vinje thereupon proved by two witnesses "that he found deft.'s son and boys among the peas and hunted them away." After hearing this the court appointed two neighbors to inspect and assess the damage.³ When the parties were summoned to hear the decision of the arbitrators, Vinje added to his former grievance the further

¹ N. Y. Gen and Bio. Soc. Coll., ii, 32, 52, 55, 64, 72.

² Rec. of N. A., ii, 122.

³ Pratt, *op. cit.*, p. 19.

complaint that Claessen's "hens and pigs still daily run among his corn;" and he asked authority to kill them if they were not kept out. We are not told what the arbitrators had to say, but Claessen was evidently by this time much excited. He declared that the children had not "taken or injured anything to the value of a pea's pod;" that "his son had already been beaten therefor by pltf., so that he came home black and blue;" "that many other children, when they came out of school, were in there;" and finally closed by denying "that his hens or pigs run in pltf.'s land or corn." Vinje then acknowledged "to have struck deft.'s son at the time. He could not catch any other but him." The court having heard both decided, "since pltf. acknowledges to have beaten and punished deft.'s son, that he has destroyed his right;" and accordingly dismissed the suit with an order "that deft. shall keep his hens and pigs out of the corn."¹

That Frans Claessen was the master of these "school boys" is evident from two distinct references to them as his boys. Vinje found "deft's son and boys among corn and peas,"² and the arbitrators refer to the damage done to the corn "by Frans Jansen's boys."³ Valentine says: "In 1660 Frans Claessen kept a private school in this city. He died in 1662."⁴ The second date is wrong. So far as appears the data given above in the court case include all that is known of his school keeping. But on the 26th of September, 1657, there was baptized in New Amsterdam a child of "Mr. Frans Claszeen" and "Immetje Dircks."⁵ The title "Mr." fixes the father as the schoolmaster under consideration. Four years later (Oct. 26) appears in court records a reference to "Immetje Dircks, widow of Frans Claessen."⁶ It is thus clear that the "Mr. Frans Claessen" who was teaching in 1656 had died before October 26, 1660.

In connection with the next private master, Jacobus van Corlaer, we have a very clear statement of the requirement that one must obtain consent from the director general and council before undertaking to teach school in New Amsterdam.

Corlaer had been in the colony since 1633.⁷ Our first information connecting him with the schoolroom is of February 19, 1658, when Stuyvesant's police officer "was directed to proceed to the house of Jacobus van Corlaer, who for some time past has undertaken to keep a school in this city * * * and to order the same to cease

¹ Rec. of N. A., II, p. 137.

² *Ibid.*, p. 122.

³ *Ibid.*, p. 134. He seems to have been called indifferently Frans Claessen and Frans Janssen. See *ibid.*, p. 126.

⁴ Corporation Manual, 1863, p. 565.

⁵ Coll. of N. Y. Gen. and Bio. Soc., II, 47.

⁶ Rec. of N. A., III, 235.

⁷ Narratives of New Netherland, p. 203, note.

holding school, until he has asked for and obtained the consent in proper form.¹ When Corlaer was thus compelled to close school, his patrons becoming "greatly interested thereby" petitioned the burgomasters and schepens that he might be "allowed again to keep school; inasmuch as their children forget what the above named Jacob van Corlaer had to their great satisfaction previously taught them in reading, writing, and ciphering, which was much more than any other person, no one excepted."²

Probably it was bad tactics for the patrons to appeal from the action of the high and mighty director general and council to the less high or mighty burgomasters and schepens. The latter could do nothing but intercede with the former. They first spoke "verbally thereon;" but their "honors were not pleased to allow it, for reasons thereunto moving" them. Whereupon the worthy burgomasters and schepens in a formal address "to the right honorable director general and councillors of New Netherland" represented "with all respect that some burghers and inhabitants" of the city had petitioned them in the matter, and "they therefore, in consequence of the humble supplication of the burghers and inhabitants aforesaid, again request that your honors may be pleased to permit the above-named Corlaer again to keep school."³ But Corlaer himself had not yet asked for consent in proper form; clearly he was stiff-necked and needed further disciplining. Moreover, those "burghers and inhabitants" who had been so ignorant or perverse as to direct their petition to the wrong body needed to be instructed, while the burgomasters and schepens needed to distinguish more clearly the confines of their prerogatives. To meet this situation a suitable reply sufficiently terse, sufficiently autocratic, was drafted in Stuyvesant's own style:

It was decreed: To keep a school and appoint a schoolmaster depends absolutely from the *jus patronatus*, in virtue whereof the director general and council have for good reasons forbidden it to Jacobus van Corlaer, who arrogated the same to himself without their order; and they persist in their resolution and interdict.¹

This not only made clear to the burgomasters and schepens their impotence in the matter, but also brought Van Corlaer to a proper state of submission. Before the next meeting of the council he presented his petition; but, alas, he had already gone too far in his perverseness. "For weighty reasons the director general and council decree: Nihil."² Whether "the weighty reasons" included more than that Corlaer had "presumed to take such on himself without their order," we can not say. The record tells us nothing more. Apparently, Corlaer's teaching career was finally ended, however much he and his patrons may have objected to Stuyvesant's

¹ N. Y. Col. Doc., xiv, 412.

² Rec. of N. A., II, 348.

³ N. Y. Col. Doc., xiv, 413.

act. But we are thereby the gainers, in getting so clear and distinct a statement of the law governing the licensing of private masters.

Of Jan Lubbertsen our knowledge is small indeed, being little more than is contained in the council minutes of August 13, 1658.

August 13, 1658, Tuesday.—Received the petition of Jan Lubberts, requesting consent to open a school for instruction in reading, writing, and arithmetic.

It was answered:

The request is granted, provided he behave himself as such a person ought to behave.¹

Lubberts married the following June; and between December 29, 1660, and August 25, 1683, the baptisms of eight children are recorded.

It is worth while to note that Lubberts, as well as Corlaer, taught exactly the three R's. Also that the director general and council expected good behavior of schoolmasters.

The career of Jan Juriaensen Becker was so checkered that we venture to present in formal outline those events of his life which took place within the year 1660, when he was licensed.

January 14. Jan Juriaensen Becker at New Amstel reads the sermon on Sundays. (Cal. Dutch MSS., p. 340.)

April 1. He is indicted for selling liquor to Indians. (*Ibid.*, p. 209.)

April 9. Various persons testify in Becker's behalf that brandy is openly sold throughout the South River. (*Ibid.*)

April 12. Becker makes his defense. (*Ibid.*)

April 26. Jan Juriaensen Becker, for selling liquor to the Indians, is fined 500 guilders, degraded from his office as clerk of the church, banished from the South River, and required to pay costs of the case. (*Ibid.*, p. 210.)

May 3. Becker petitions for pardon. (*Ibid.*)

May 3. His fine is remitted. (*Ibid.*)

August 19. He presents the following petition to the director general and council:

To the Right Honorable, the Valiant Director General, and the Honorable Council of New Netherland:

Jan Juriaensen Becker, with due reverence, humbly shows, that owing to recent changes of fortune, he, the petitioner, not knowing what else to do, has engaged in the business of a tapster, in which he has invested nearly all his real and personal property for himself and his family, therefore, the petitioner applies to your honors, humbly beseeching and praying that your honors may please to look with compassion upon your petitioner (being a former employee of the company) and employ him as a clerk in the service of the company, either at the Esopus, here, or elsewhere, wherever your honors may think it advisable; or, in case your honors for the present can not employ him in the service, that the petitioner may then be permitted to keep school, to teach the youth reading, writing, etc., upon which he awaits a favorable decision.

Your Honors' willing servant,
(was signed) J: Becker.

Done at Amsterdam
in New Netherland,
this day, 15 August, 1660.

Voted to make this apostil:

Fiat schoolkeeping. Done at Fort Amsterdam in New Netherland.

Date as above.²

¹ N. Y. Col. Doc., xiv, p. 424.

² N. Y. Col. MSS., vol. 9, pp. 377-8.

August 31. Becker is fined thirty guilders because "he entertained people [in his tap house] after nine o'clock, and tapped during the sermon"; also ten guilders "for having behaved offensively to the officer."¹

September 7. "On the petition of Jan Juriaensen Becker endorsed: The court persist in the judgment by them pronounced."²

This closed his career so far as we know it, in New Amsterdam. Ten years later we learn that "Jan Jeurians Becker had a Graunt to keep y^e Dutch school at Albany for y^e teaching of youth to read and to wryte y^e which was allowed of and Confirmed" by Governor Nichols (1664-8). We may then suppose that he moved to Albany soon after 1660 and began to teach. That he was successful in his teaching we know, because Governor Lovelace "thought fit that y^e said Jan Jurians Becker who is esteemed very capable that way shall be y^e allowed schoolmaster for y^e instructing of y^e youth at Albany and partes adjacent he followed y^e said Imployment Constantly & diligently and that no other be admitted to interrupt him."³

In the case of Johannes van Gelder, as with Steyn and Lubberts, we have only his license to bear witness to his teaching:

To the Noble, Great and Respected, the Director General and Council in New Netherland:

Shows reverently, Johannes van Gelder, a citizen and inhabitant of thais city, how that he, your petitioner, being tolerably well acquainted with reading and writing, it has happened that several of the principal inhabitants of this city have advised and likewise encouraged him to open a public school, and consequently have induced the petitioner, who looks out for a living in an honorable way, to adopt their advice, in the hope that he shall execute this task to their satisfaction who shall make use of his service. But as this is not allowed, except upon permission previously obtained, so he addresses himself to your hon^{rs}, requesting their permission for this work, viz., keeping a public school, which doing, etc.

Your Honors' subject and servant,
Johannes van Gelder.

The apostell was.

Fiat quod petitur

21 September, 1662.⁴

The expression "public school," as used in this petition, can mean nothing more than a school open to the public. With Van Gelder ends our list of private masters at New Amsterdam. Whether there were private masters elsewhere in New Netherland we can not say. Certainly there were few, if any.

The principal things to be noted in this connection are, first, the number of private masters in addition to those of the official school. That there were several of these in 1649 must be inferred from Tienhoven's statement about the masters teaching "in hired houses." We may therefore suppose that there were more in the following decade, when the town had doubled in size. Unfortunately we have

¹ Rec. of N. A., III, p. 193.

² *Ibid.*, p. 205.

³ Munsell's *Annals of Albany*, iv, 15.

⁴ Pratt, *op. cit.*, p. 21.

no means of knowing how long any of these private masters taught; so that we can judge but little as to how many teachers were in the city at any one time. Of the nine names considered in this chapter, four certainly taught for a greater or less length of time. Of the five remaining names, Andreas Hudde may never have taught; since we have no record of "the opinion of the minister and consistory," which was asked on his application. Jan Juriaensen Becker quite possibly never taught in Manhattan. Of Steyn, Lubbersten, and Van Gelder we have no reason to doubt that they taught, although we have no evidence of the actual fact. Probably, then, at least seven of these named men conducted private schools in New Amsterdam for a greater or less length of time; and quite probably there were also other private masters, whose connection with the schoolroom is now lost. All in all, it appears that more instruction was given by private masters than by the official school.

Second, we note that the director general and council required that their permission be first obtained before anyone could teach in New Amsterdam. Whether this was as strictly enforced all the time as it was in the case of Van Corlaer, we can not say.

It is an enlightening commentary on the inadequacy of our records that in no instance do the record of licensing and the known fact of teaching concur; that is, of those known to have been licensed we do not know that they taught, and of those known to have taught we do not know that they were licensed. But this need not make us conclude that the requirement in Van Corlaer's case was exceptional. Van Ilpendam and Provoost quite possibly began to teach under Kieft's administration, when such matters were probably not considered. In the case of Frans Claessen, we must conclude that the record of his licensing has been lost. It is to be remarked that while the city government was by Holland custom quite competent to grant licenses, the burgomasters and schepens of New Amsterdam were not allowed any participation in the matter. That belonged exclusively to the "right honorable director general and council."¹

¹ But note the case of Carel de Beauvois, p. 124.

CHAPTER VIII.

THE SCHOOLS OF THE DUTCH VILLAGES OF NEW NETHERLAND.

The Dutch villages chartered during the Dutch period were, as heretofore stated, Beverwyck (Albany), Breuckelen (Brooklyn), Midwoud (Flatbush), Amersfoort (Flatlands), New Amstel (New Castle, Del.), New Haerlem (Harlem), Wiltwyck (Kingston), Bergen, Boswyck (Bushwick), and New Utrecht. For our present purposes we may add Stuyvesant's Bouwery, although this was never chartered.¹

Beverwyck (Albany) may be said to have been founded about 1630 by Kiliaen Van Rensselaer, whose patroonship included a considerable body of land in the neighborhood. Rensselaerwyck, the colony, grew but slowly; Beverwyck, the village, which in 1643 was "composed of about one hundred persons," in 1646 had no more than ten houses.² We have seen above that in the case of these patroonships, the "patroons and colonists" were to endeavor as quickly as possible to find some means whereby they might support a minister and a schoolmaster, and "for the first" they should procure a comforter of the sick. The early records of this colony are fairly adequate and give proof that no comforter of the sick was ever sent to it. It was 1642 before a minister was brought over, and 1648 before we hear definitely of a schoolmaster. He, it appears, kept no more than a private school. Evidently this item of the "freedoms," granted in 1629, could be disregarded with impunity.

The first known reference to a school is found in a letter of the patroon to his agent, Arent van Curler, March 16, 1643, in which a temporary church is under consideration. "This," Van Rensselaer says, "could be made ready quickly, about 26 feet wide and 60 feet long, but the location must remain as directed. * * * Next to the house of D^r Megapolensis would not be unsuitable, and later it could be used as a school."³ To this Van Curler replied (16 June, 1643): "As for the church * * * that which I intend to build this summer in the pine grove will be 34 feet long by 19 feet wide. It will be large enough for the first three or four years to preach in, and can afterwards always serve for the residence of the sexton, or for a school."⁴

¹ The facts of general history that may be needed in this chapter will, for the most part, be taken from Brodhead's New York, and without further acknowledgment.

² O'Callaghan, History of New Netherland, I, 390.

³ Van Rensselaer-Bowler MSS., pp. 662-3.

⁴ O'Callaghan, New Netherland, I, 459.

While patroon and colonists appear to have been slow in school matters, this correspondence shows that Van Rensselaer nevertheless felt responsible for providing a schoolhouse along with the other necessary public buildings. In this connection we may point out two instances where the duties of voorlezer and schoolmaster were not always united. When, in 1632, instructions were issued by Kiliaen Van Rensselaer for the government of his colonial court, Brandt Peelen was "authorized to read aloud some chapters from the Holy Scriptures, for which purpose a Bible is herewith sent * * * as well as a *huys postille schulteti* (Abraham Schultetus, Huys Postillen), in which every Sunday throughout the year has its special lesson and exposition of God's word."¹ This Brandt Peelen was specifically engaged as a farmer for Van Rensselaer, and there seems not the slightest doubt that he gave to his farm his entire time. Certainly he did not teach school.² At a later date (1653) Antony de Hooges was for a while voorlezer during the time he was secretary of the colony. It seems practically certain that he was not schoolmaster.³

The first certain reference to a schoolmaster in the colony is of date April 30, 1648, when Evert Nolden was permitted by resolution of the court to establish himself as a schoolmaster. Some three years later he was prosecuted for having crushed Adriaen Dirchsz' nose with a pair of fire tongs. Beyond these facts we can say little of him. He seems to have left the colony in 1660.⁴ The data available indicate that Nolden was a private master.

The first definitely-known action of the authorities looking to the establishment of a public school was taken September 9, 1650, when the inhabitants petitioned the council of the colony for a competent schoolmaster. In response the council appointed Arent van Curler and Goossen Gerritz trustees of a fund to be raised for the building of a school. Not long afterwards Adriaen Jansz van Ilpendam came up from New Amsterdam, where he had been a private master, and took charge of the public school. On November 23, 1651, the court, upon his petition, granted him 50 florins toward the payment of his house rent.⁵

There is a difficulty in the records about the school in Beverwyck at this time. Van Ilpendam, who began in 1651, was still teaching in 1657⁶ and apparently in 1660. But in 1652, when D^e Schaats was brought over as minister, it was stipulated that he should "pay

¹ Van Rensselaer-Bowler MSS., p. 208.

² *Ibid.* See index under *Peelen, Brandt*.

³ *Ibid.*, p. 825.

⁴ *Ibid.*, p. 838. Nolden was later at Kingston. See p. 213n.

⁵ *Ibid.*, 843. The suggested identification in this reference of Adriaen Jansz van Ilpendam with Adriaen Jansz Croon is now believed by Mr. Van Laer to be incorrect.

attention to the office of schoolmaster for old and young."¹ Does "pay attention to the office of schoolmaster" mean that the domine was to teach school? This seems the natural, if not the necessary, interpretation and all the writers have thus accepted the words. But certain difficulties attend this idea. No other minister in charge of a church in New Netherland is known to have taught the parochial school. The contrary rule would seem—save possibly in the case under discussion—to have held without exception. The Holland custom and even church ruling were against the minister's serving as schoolmaster.² Furthermore, why should this most unusual duty be forced thus uniquely upon the domine when the town had a schoolmaster to whom the town made official contribution? And still further why does the contract add the words "for old and young?" Are we asked to suppose that the old attended the parochial school? In view of these difficulties, it might be safer to doubt that D^r Schaats was ever the master of the village school. Perhaps he was to be spiritual schoolmaster. To give the whole record, however, we must add that D^r Schaats wrote in 1657: "There is no prelector nor precentor here, which duties I have had to fill."³ This seems to mean that at the Sunday church meeting the minister was himself to perform those parts of the service which usually fell to the voorlezer: and this would fit with the filling of this office by De Hooges in 1653, as above noted. But, on the other hand, D^r Schaats may intend by precentor to include also schoolmaster. So that he may be telling us that he had to teach the parish school. Under the circumstances an entirely satisfactory conclusion seems impossible.

On September 1, 1660, Van Ilpendam brought suits against two of his patrons for unpaid tuition, demanding in the one case "payment of ten and a half beaver and two shillings for school money;" in the other, "payment of two beavers for one year's school money." In each case "the defendant acknowledges the debt," and was condemned to pay the master, "and this within six weeks."⁴ We may accept the valuation of the beaver at 8 guilders Hollands, so that tuition in Van Ilpendam's school seems to have been 16 guilders a year or 4 guilders a quarter. There is, of course, no reason for saying that the same rates held for all grades of pupils. Since these rates are a good deal larger than those allowed to Pietersen at New Amsterdam in 1661, it is an easy inference that Van Ilpendam had to make up in tuition fees for a small guaranteed salary. How long after 1660 Van Ilpendam remained at Beverwyck, and whether he was the only master, we can not say. For many years he was a notary

¹ O'Callaghan, *History of N. N.*, II, p. 567.

² *Acta van part. syn. van Zuid-Holland*, I, 491.

³ *Eccel. Rec.*, p. 386.

⁴ Pratt, *op. cit.*, p. 16.

public. It is said that he committed suicide in 1686, at about the age of 67.¹

It seems possible that Jans Juriaens Becker came to Albany about 1663 and opened a school. When he began to teach is not clear,² but probably he was teaching there at the time of the English occupation. We read in his license, issued by Governor Lovelace in 1670, that "Jans Jeurians Becker had a Graunt to keep y^e Dutch school at Albany for the teaching of youth to read & to wryte, y^e which was allowed of and confirmed to him by my predecessor, Coll. Richard Nichols."³ These words would seem, not certainly, but probably, to imply that Nichols found Becker in possession of a "graunt to keep y^e Dutch school at Albany," and that he "allowed and confirmed" this "graunt" to Becker. As Nichols immediately followed the Dutch rule, this reasoning, if admitted, would fix Becker in charge of "y^e Dutch school at Albany" at the time of the surrender.

It is probable that the schoolmaster was on the regular pay roll of the town before the end of the Dutch régime. Article five of the terms of surrender of the town of Albany to the English (October 10, 1664), stipulated "that the salary to the Preacher, Clarke, Secretary, and Boade (messenger) shall be continued and paid as formerly till further order."⁴ While these are English terms, and are accordingly not certainly descriptive of the Dutch practice, a later document makes it quite possible that under the title of "clarke," reference is had to a voorlezer and schoolmaster. In 1671, in a report to Governor Lovelace, the statement was made that—

The Charge yearely of ye Towne of Albany to the Offic^{rs} is—

To y ^e Minst ^r	125 Beav ^{rs} at f30 y ^e Beav ^r
To y ^e Secreta ^{ry}	600 guild ^{rs} Seaw ^t
To y ^e Boade	300 guild ^{rs} Seaw ^t
To y ^e Reader	400 guild ^{rs} Seaw ^t ⁵

Here are named the same four officers as in the articles of surrender, except that "clarke" of 1664 appears as "reader" in 1671. "Reader" and "clarke" were both contemporaneous renderings of the Dutch voorlezer. The former was rather the translation of the term; while the latter was the name of an analogous officer in the English church. There is then no reason to doubt that the "clarke" in 1664 was the voorlezer in the Dutch church. The salary of 400 guilders given to him in 1671 is identical with that paid for the combined services of schoolmaster and voorlezer at Bushwyck in 1662, at New Haerlem in 1670, and at Flatbush in 1676.⁶ The pre-

¹ Pearson's *Early Records of Albany*, p. 7n.

² But see Pratt, p. 62.

³ Munsell's *Annals of Albany*, iv, 15.

⁴ N. Y. Col. Doc., xiv, 559.

⁵ Executive Council Minutes, i, 82

⁶ See pages 138, 160, 170. The salary here named is greater by 100 guilders than that paid at Flatbush same time (1671) for both services (see p. 168).

sumption of like salary, like service is so strong, especially when taken in connection with the almost universal custom of combining the two offices, that it seems hardly possible to doubt that the "reader" or "clarke" at Beverwyck was also the schoolmaster, who thus was on the payroll of that town during the closing years of the Dutch régime as well as afterwards.

Breuckelen (Brooklyn) had been settled but a very few years when in 1646 it was granted a charter. Its growth was, however, slow. It was 1655 before there was a church organization and regular preaching services. In 1660, the town consisted of 31 householders and 134 people. It is 1661 before we hear of a school. On July 4 of that year the Breuckelen Court reported to the director general and council that they found it necessary that a court messenger be "occasionally employed in the village of Breuckelen and all around where he may be needed, as well to serve summons, as also to conduct the service of the church, and to sing on Sundays; to take charge of the school, dig graves, etc., ring the bell, and perform whatever else may be required." They had found "a suitable person * * * one Carl van Beauvois, to whom they have hereby appropriated the sum of fl. 150, besides free dwelling;" but they were "apprehensive that the said C. v. Beauvois would not and can not do the work for the sum aforesaid, and the petitioners are not able to promise him any more." They accordingly "with all humble and proper reference" requested of the "honorable, wise, prudent, and most discreet gentlemen," "the right hon'ble director general and council" "to be pleased to lend them a helping hand."

In answer to such a request so politely urged, the director general and council agreed to "pay fifty guilders in wampum, annually, for the support for the *voorsanger* and schoolmaster in the village of Breuckelen."¹

According to Stiles,² two days after the answer of Stuyvesant the church drew up the regulations governing De Beauvois in the discharge of his duties as *voorlezer*, schoolmaster, and sexton. He was to set forth "on the psalm board" the psalms to be sung before the session. "After the first ringing of the bell," he should "place the stools and benches in the church or meeting house in order, and read a chapter out of the Holy Scriptures and the twelve articles of the Christian belief." (It was in virtue of this *reading before* the sermon that such an officer was called the "*voorlezer*.") Immediately on the third ringing of the bell he should "begin to sing the designated psalm." (Because he *led* in the *singing* he was called the "*voorsanger*.") "He shall properly, diligently, and industriously attend the school, instil in the minds of the young the fear

¹ Pratt, *op. cit.*, p. 31 (a very different translation in N. Y. Col. Doc., xiv, pp. 502-3). The two hundred guilders, probably all in wampum, would be 100 guilders in coin or \$40.

² History of Brooklyn, i, 420.

of the Lord, and set them a good example; to open the school with prayer and close with a psalm, also to exercise the scholars in the questions in the 'groat regulen' of the reverend, pious, and learned father D^r Johannes Megapolensis, minister of the Gospel in Amsterdam in New Netherland."¹

It is interesting to note that the consistory was to assist in the support of the schoolmaster. "The said precentor in addition to the salary allowed by the governor and council of New Netherland and the magistrates of Brooklyn, will be furnished by the consistory with house rent and entertainment or provisions."²

Of the master here employed, we read that "there appeared before the New Amsterdam court" some two years previously, "requesting his small burgher-right, Carel Beauvois of Leiden, intending to keep school."³ Quite possibly he taught privately in New Amsterdam during the two years intervening between his appearance at the court and his position at Brooklyn.

It seems probable that De Beauvois was the first schoolmaster in Brooklyn. Four years before there was none, for in 1657 the ministers at New Amsterdam, writing to the classis about "the condition of the church in our Province," stated, "that so far as we know, not one of all these places, Dutch or English, has a schoolmaster, except the Mannhattans, Beverwyck, and now also Fort Casimer on the South River."⁴ The difficulty of securing capable teachers was one reason for the paucity of schools. The same letter said, "There are few qualified persons here or can or will teach." The necessary means, too, were lacking, "the people having come half naked and poor from Holland." While full data is lacking, it seems, on the whole, probable that this school of De Beauvois was the beginning of formal school keeping in Brooklyn.

It is interesting to note how many offices this one man filled—court messenger, voorlezer, voorsanger, schoolmaster, and sexton. Of these, only the duties of court messenger could interfere with school keeping—unless it were digging graves. Probably the interferences of both kinds would be very few, for courts and burials were alike infrequent. It is said, though on what documentary evidence is not stated, that De Beauvois continued to teach at Brooklyn until 1669.⁵

Midwoud (Flatbush) was first formally settled about 1652. It seems to have grown more rapidly than some of the other Dutch

¹ This reference to the catechism of D^r Megapolensis is the more interesting because five years before the Classis of Amsterdam had deemed it "inadvisable to permit the printing, much more the introduction of the same for the instruction of youth;" and had gone so far in their objection as to appeal to the Lords Directors in the matter. The making of individual catechisms would, it was feared, introduce "mad disputes, schisms, and all manners of confusion." Eccl. Rec., pp. 347, 349-350, 351-2.

² Stiles, *op. cit.*, i, 429.

³ Rec. of N. A., vii, 223.

⁴ Eccl. Rec., p. 398.

⁵ Stiles, *op. cit.*, i, 118.

villages on Long Island, being chartered just two years after settlement (1654). In 1655, when plans for laying out the village were adopted, it was "provided that 5 or 6 lots be secured for public buildings, such as for the sheriff, the minister, the secretary, schoolmaster, village tavern, and public courthouse."¹ Some three years later a plan was proposed by the town court and approved by the director general and council of setting aside 25 morgans (50 acres) of land to be rented out, the income to be "employed to repair the church and keep it in a decent order," while the rent from a like amount was to be used for the "maintenance of a school, church services, etc."²

So far as is known these preparations for a school brought no result until 1659. On January 27 of that year the deacon's book at Flatbush records the item: "Given to Jan Stryker for the school 3 gl. 4 st."³ That the school was in actual operation is evident from the next reference on May 21 of the same year: "For a bucket for the school, 1 gl. 5 st."⁴ Who the teacher was, when he began to teach, under what management—these are questions that our present data do not allow us to answer. The Jan Stryker here mentioned was one of the church masters. The management of the school was probably the same as that which appears in the first known contract. On June 9, 1660, "the schout and schepens, with the cooperation of minister and consistory" engaged the "person of Reynier Bastiaensen van Giesen" to act as "process server for the schepens' court," "also to serve the church in leading the singing and in reading, to arrange the seats, to ring the bell, and furthermore to hold school, to dig graves and to look after everything else that is needful thereto." They "raised therefore the sum of 200 guilders yearly,"⁵ of which sum the court promises 150 guilders yearly and 50 guilders for the church service."⁶

This contract is similar to the Brooklyn agreement with De Beauvois. The pay is the same, and the duties are practically identical. While the Flatbush people did not petition Stuyvesant for aid in making up the original salary, as did Brooklyn, nevertheless we find them the next spring (March 29, 1661), presenting a petition to the

¹ O'Callaghan, *Laws of New Netherland*, p. 199. In the Flatbush town records (100:6) is what purports to be a copy, made in 1670, of a patent given to the village, as follows:

"The director general and council of Netherland to all those who shall see or hear these presents, greeting: Know that we, for the advancement and maintenance of divine worship and the support of the church, school, and school service in the town of Midwoud, on Long Island, to the said town and the inhabitants thereof who are already there or shall come later, have allowed, granted, and given * * * four lots of land in the year 1651, in addition to the other lands laid out for the aforesaid purpose. * * *"

If there be no error in this date of 1651, the town was laid out earlier than has been generally supposed; and Stuyvesant or the original settlers deserve considerable credit for their early interest in the welfare of church and school.

² Pratt, *op. cit.*, pp. 27-28.

³ *Loc. cit.*, i, 98^B.

⁴ *Ibid.*, i, 99^B.

⁵ Probably in seawant; if so, at the rate of two for one, this would be equal to \$40.

⁶ Flatbush town records, 103: 24½.

director general and council, begging assistance on a church debt of 190 florins, of which 32 florins is for "our schoolmaster Reinier." The response was favorable to the extent of "one-half of the above amount," "when the treasury has sufficient funds."¹

The "cooperation" which the minister and consistory gave to the schout and schepens seems to have amounted practically to a copartnership. The church paid one-fourth of the salary and the court three-fourths. The wording of this financial clause seems slightly ambiguous, but the church did pay its pro rata of 50 guilders annually, as the deacon's accounts show.² It were much to be desired that we knew more about how the court got the 150 guilders which it was to give. The school lands as yet brought in no revenue (as will presently appear). A town levy was regularly made for the ordinary village expenses.³ In these villages the excise usually brought considerable income. Probably, then, these two sources supplied the town's part of the schoolmaster's salary. The 200 guilders was not the whole income of Van Giesen. While no mention is made of tuition fees, there is every probability that each child paid these according to the scale which was later explicitly fixed in the contract of Van Giesen's successor.

It is a distinct pleasure to read in the deacons' accounts (p. 101^A): "1661, 1st of January. Given to Mr Reinier for a New Year's present, 12 guilders."

This appears, sad to relate, to be the unique case of just this kind of appreciation found in the annals of the American Dutch schools. In fact, it is even probable that Van Giesen himself later had trouble in collecting his salary. The records show that the deacons continued to send him small sums for more than a year after he had gone to another place.⁴

During the latter part of 1663 the town built a schoolhouse. The items "expended on the school in the town" as found in the deacons' book (p. 102^B) amount to 173 guilders and 2 stivers. Such a sum seems rather too small to represent the entire cost of a dwelling for the schoolmaster; but we have no other information concerning the matter. This interesting note appears on the page giving the account of the expenditure: "These above-mentioned sums shall be paid back to the poor fund from the first receipts of the school property." The money in the hands of the deacons was for church expenses proper not for building a schoolhouse. To provide this was an obligation resting on the secular authorities.

¹ N. Y. Col. Doc., xlv, 499.

² *Loc. cit.*, pp. 101 ff. Public collections at the Sunday services formed the principal source of income.

³ O'Callaghan, *Laws of New Netherland*, p. 184.

⁴ Flatbush deacons' accounts, i, 102f. It should, however, be said that there is a discrepancy in the total sum paid to the total amount apparently due. If we calculate Van Giesen's salary from the date of his contract to the date of his successor's contract, this sum falls below what was actually paid him (excluding the New Year's present). Several possible explanations present themselves, but we do not seem to have the data for a satisfactory decision.

The reference to the "first receipts of the school property" is apropos of a lease but recently effected by the church masters, as follows:

The 13th of August in the year 1663.

By Jan Stryker and Jan Snedeker there was leased to Jan Buys the school land with its dependencies and equity for the six next ensuing years and he is to give for the first year two hundred guilders, at Christmas, in good strong seawant, and for the next five ensuing years two hundred and forty guilders. Furthermore it is stipulated that Jan Buys with his neighbors shall plant and improve the land, manure the old land and make good fences and keep them in repairs, and at the expiration of the aforesaid years deliver up the land in good conditions.¹

There seems no reason to doubt that Van Giesen remained until his successor was secured (Oct. 26, 1663). He then went as schoolmaster to Bergen, where his further career will be followed. It is worthy of remark that the name of Van Giesen does not appear on Dr. Strong's list of Flatbush schoolmasters.² So far as the opinion of the writer goes, however, Dr. Strong's list of early schoolmasters at Flatbush was made so carelessly as to deserve no serious consideration. He puts as the first master, Adriaen Hegeman, and ascribes to him the period from 1659 to 1671. No evidence has yet appeared which would tend to connect this Hegeman with the Flatbush school at all; and ample evidence places several other masters in the period assigned to him by Dr. Strong.

Pelgrom Clocq, previously of New Amsterdam, succeeded Van Giesen on October 26, 1663. His contract gives us a little more information than does that of M^r Reinier, though in the main the two are identical. The compensation is the same in both cases. The court and church duties are expressed in identical words. There is the same "cooperation of minister and consistory" with schout and schepens. Clocq pledges himself "to care for and fulfill his duties as an honorable man should." He is "to hold school and to receive therefor for the A B C's, 2 guilders; for spelling 2 guilders 10; for reading, 3 guilders; for writing, 5 guilders each quarter year." He is engaged "for one year and the engagement to be released on either side each year."³

This Clocq had been for quite a while previously a notary in New Amsterdam. He had not always met with commendation for the manner in which he had discharged his duties. In 1661, on account of gross carelessness—if not worse—in drawing papers, he was commanded "not to draw up during six weeks from date any instruments appertaining to the subaltern court of this city."⁴ Later (Apr. 8, 1664), while he was engaged as schoolmaster at Midwoud, one Jacob Vis appeared before the court in New Amsterdam and

¹ Flatbush town records, 106:262.

² Strong, *op. cit.*, p. 109-110.

³ Flatbush town records, 103:145.

⁴ Records of N. A., iii, 349. Later for a worse case he was fined. *Ibid.*, p. 417.

demanded "attachment against Pelgrom Clocq and imprisonment of his person, whenever found here, complaining that he is slandered by him in the highest degree. Burgomasters and schepens granted the request."¹ Apparently Clocq took care not to be found in New Amsterdam, for he finished out his year in Flatbush.² The end of his year carries the account beyond the close of the Dutch period.

In this little village of Flatbush, numbering at this time probably about 40 families (54 some 10 years later),³ we have possibly the best picture of the Dutch village in America. Nearly all the inhabitants were of Dutch stock, or at least spoke the Dutch language.⁴ All attended the Dutch church, and all by legal requirement contributed to its expenses,⁵ though probably not all were members.⁶ The minister was D^r Theodorus Polhemus, who had previously served in Brazil. The officers of the town were a schout and three schepens.⁷ These court officers were chosen by the director general and council from a double number nominated by the outgoing officers.⁸ Besides the officers of the court there were the two church masters and the consistory of the church. The former were also selected by the director general and council from a double nomination made by the court.⁹ The latter elected their own successors. The consistory, which in small places included pastor, elders, and deacons, took an active interest in the school, "cooperating" with the court throughout this period and long into the next (certainly until 1682, probably until 1711, and possibly longer). The church masters rented out the land belonging to church and school, and cared for the church and school buildings. The close interweaving of church and state is evident from all that has been said. It was made closer by the fact that often the same men held office under both. Of the 11 signatures to Van Giesen's contract, 6 are made by three men, each of the three signed thus in a dual capacity. Jan Snedeker and Jan Stryker each appear to have held at one time the three offices of schepen, church master, and member of the consistory.

From what has been said, it is evident that there was in this Dutch village no democracy so far as governing went. But probably it

¹ Records of N. A., v. 47.

² He received his salary for exactly one year. See Flatbush deacons' accounts, i, 102^B; and Flatbush town records, 106 : 252.

³ Doc. Hist. of N. Y., iv, 97.

⁴ In 1698, after a full generation of English rule, out of 66 families only 4 were English. *Ibid.*, iii, 89.

⁵ N. Y. Col. Doc., xiv, 379.

⁶ In Brooklyn, for example, in 1660, there were 134 persons in 31 families, but only 24 church members, Eccl. Rec., p. 488.

⁷ O'Callaghan, Laws of N. N., pp. 390-391.

⁸ No specific reference can be adduced to show this procedure for Flatbush; but its probability is sufficiently established from the custom with other villages. Cf. New Haerlem, p. 131.

⁹ N. Y. Col. Doc., xvi, 520.

approached more nearly an equality of actual life conditions with greater unity of interests than do our present-day American villages.

Amersfoort, now called Flatlands, though chartered at the same time with Midwoud (Flatbush), was of slower growth. In 1663 the former was just building a church, falling in this respect about five years behind the latter. In 1675 the number of families in the one was exactly two-thirds of the number in the other. So far no reference to a school here during the Dutch period has been found. If the organization of a school followed the building of a church by as much in Flatlands as it did in Flatbush, it was not until after the English occupation that the town had a school. On the other hand, what was done at Bergen, for instance, and the accidental character of our knowledge of the first school¹ in that village must prevent any certain conclusion that Amersfoort was slow in organizing its school.

New Castle, Del., called by the Dutch New Amstel, owes its origin to an effort on the part of the city of Amsterdam to promote the colonization of New Netherland. The city bought the South (Delaware) River region and began in 1656-57 the settlement of the new colony. The terms offered to prospective settlers were liberal. As first proposed the terms were somewhat more explicit than was the form finally adopted. In the first draft the city was to erect "about the market, or in a more convenient place, a building suitable for divine service: item a house for a school, which can likewise be occupied by the person what will hereafter be sexton, psalmsetter, and schoolmaster." It should also "provisionally provide and pay the salary of a minister and schoolmaster."² The second draft said nothing of a house, but provided "that the city of Amsterdam shall send thither a proper person for schoolmaster, who shall also read the Holy Scriptures and set the psalms." The city should also "provisionally and until further opportunity provide the salary of said schoolmaster."³

The minister was not to be sent over until a certain greater population was attained. We notice here that three offices were united in one, voorlezer, voorsanger, and schoolmaster. "The commissioners of the affairs of the new colony" arranged through the classis for "a schoolmaster, who will also visit the sick, and publicly read God's word and sing the psalms,"⁴ thus adding the office of siecken-trooster to the three previously named. If only the position of sexton had been added, as the first draft stipulated, the list would have been complete. Possibly this office went without saying.

The classis in discharge of the duty imposed "sought out, for this purpose, a worthy man named Evert Pietersen." They examined

¹ See p. 137.

² N. Y. Col. Doc., I, p. 620.

³ *Ibid.*, p. 631.

⁴ Eccl. Rec., p. 378.

him "in all the above-named particulars," with the result that he was considered "properly qualified."¹ Pietersen was elected for four years, the term of service to exclude the time spent in passage, both going and returning.² His salary was "forty guilders per month."³ He arrived at the South River April 25, 1657, and shortly afterwards began his work.⁴ On August 12 he wrote back to Amsterdam: "I am engaged in keeping school, with twenty-five children in it; but I have no paper nor pens for the use of the children, nor slates and pencils." "I must also respectfully request you to go with my wife to Van Beeck, and ask him to get the one hundred and fifty guilders of my already earned wages * * * This will assist her in making provision for the winter, by buying meats, bacon, turf, and wood."⁵ Our schoolmaster felt the isolation of so distant a post. In the same letter he begs his friend, "write me also of the war between the Swedes and Danes, and send a part of the Gazettes, that I may have something else to read." It may be noted that this letter gives the earliest known reference to the use of slates in America.⁶

The probabilities are that Pietersen served this school continuously until the fall of 1660, when he returned to Amsterdam, leaving the work, apparently, to his son Arent. The formal transfer of the position from father to son seems, however, not to have been made until the spring of 1661.⁷

Just one month after Pietersen received his last salary payment for work at the South River, "Arent Evertsen, comforter of the sick, etc.," received 50 guilders. On the 22d of the following October he received 100 guilders,⁸ again as "comforter of the sick, etc." One might doubt whether these references would do no more than show that the son succeeded to the ecclesiastical duties of the father. But, fortunately, a more specific reference is available. On December 10/20, 1664, "the worthy Arent Evers Molenaer, late schoolmaster, precentor, and comforter of the sick at New Amstel," conveyed to one Couseau "the monthly salary and board wages due him from the

¹ Eccl. Rec., p. 378.

² O'Callaghan, *Laws of N. N.*, p. 272.

³ Eccl. Rec., p. 402.

⁴ N. Y. Col. Doc., ii, 17.

⁵ Eccl. Rec., p. 402. From April 25 to August 10 is three and a half months which at "forty guilders per month" would exactly make one hundred and fifty guilders. Evidently Pietersen received board money in addition to his salary.

⁶ See p. 223.

⁷ See N. Y. Col. Doc., ii, 179-182; Pratt, *op. cit.*, pp. 18, 19.

This family affords an excellent illustration of the Dutch system of names. Evert Pietersen's son Arent was not called Arent Pietersen, as would now be done, but "Arent Evertsen," that is, Arent the son of Evert; just as the father was Evert the son of Pieter. Thus Pietersen, in the letter above referred to, speaks of "my son Arent Evertsen, a miller," and of "my son Jan Evertsen." Frequently a man's occupation was added to his name, from which practice many surnames in time arose. The word "miller" as seen above is Molenaer; and this elder son is generally referred to thereafter as "Arent Evertsen Molenaer," even after his occupation had come to be that of school keeping. After the English came, surnames became frequent. Pietersen and his sons adopted Keteltas then as their family name.

⁸ N. Y. Col. Doc., ii, 181. The same records, however, show that back salary was paid to Pietersen after his resignation.

worshipful burgomaster of the city of Amsterdam in Europe."¹ As this was soon after the English occupation (hence the doubly expressed date, Dec. 10/20), it is to be inferred that Molenaer remained as schoolmaster until the colony passed from the control of the Dutch.

The record of New Amstel in education is thus in many respects the best among the Dutch villages. A schoolmaster sailed with the first colonists and began his school shortly after they landed. The salary of this master came from the public funds and was possibly the largest given to any elementary master in New Netherland. The school continued without interruption—so we may suppose—until a hostile nation changed the government. As this colony was the only one in New Netherland not under private or semiprivate auspices, it may with propriety be taken as the one which most fairly represents the general attitude of the Dutch people toward education.

New Haerlem affords a good illustration of the procedure of the Dutch in settling a village. The director general and council in 1658 announced "a new village or settlement at the end of the island" of Manhattan. In order to encourage "lovers of agriculture," each settler was to "receive by lot in full ownership 18, 20, to 24 morgen² of arable land; 6 to 8 morgen of meadows." "When the aforesaid village has 20 to 25 families, the director general and council will favor it with an Inferior Court of Justice; and for that purpose a double number is to be nominated out of the most discrete and proper persons for the first time by the inhabitants and afterwards by the magistrates and presented annually to the director general and council; to elect a single number therefrom." When the village should be ready for the court it was also to be "accommodated with a good, pious, orthodox minister, toward whose maintenance the director general and council promise to pay half the salary, the other half to be supplied by the inhabitants in the best and easiest manner, with the advice of the magistrates of the aforesaid village, at the most convenient time."³ It is disappointing to note that no mention is made of a school.⁴

Two years later the required number of families were reported, and Stuyvesant authorized the Inferior Court of Justice to consist of three commissaries,⁵ before whom should be brought all questions arising in the said village between master and servant, neighbor and neighbor,

¹ Minutes of the Orphan Masters, II, 4.

² One morgen is about 2 acres.

³ Riker's (revised) New Harlem, p. 170.

⁴ The town and church records of this village are no longer available; but Riker had access to them in the preparation of the history of New Haerlem, and quoting from them so freely that the loss of the records is in great degree made good by his book. We shall, in treating the New Haerlem school, both here and in Chapter XI, use Riker's evident quotations as so much primary material. Such statements of his as do not certainly appear to be based specifically on the original records will be treated as secondary-source material.

⁵ One of these was Daniel Tourneur who disputed with Curtius about the hog sale.

buyer and seller, "and other such like; also all criminal actions consisting of misdeeds, threats, fighting, or wounding." "Any party feeling himself aggrieved may appeal to the director general and council" "from all judgments exceeding fifty guilders."¹

By the close of 1661 there were 32 male adults in the village, of whom it is said that 11 were French, 4 Walloon, 7 Dutch, 4 Danish, 3 Swedish, and 3 German,² truly a multinational population for so small a town. A word about the degree of illiteracy of these men may not be amiss. As to 12 of them, no data have been found. Of the remaining 20, 12 write their signatures, while 8 made their marks. If the 12 for whom there are no data preserved the same proportion there is an illiteracy of 40 per cent, which, as will later appear, is higher than is found at Albany and Flatbush.³ Even if it be supposed that all the 12 unknown wrote their names, which is not probable, there would still be an illiteracy of 25 per cent.

Riker thinks that Michael Ziperus was the first schoolmaster at New Haerlem, though no certain proof is given.⁴ The suggestion has, however, much probability. This D^r Ziperus came to New Netherland in 1659, "in the hope of there securing a call in one place or another."⁵ About a year later he seems to have been called to officiate as minister at New Haerlem, so far as was permitted to one who had not been ordained. He had some years before been connected with "the school at Alckmaer," where "for many wicked acts, such as obtaining articles from stores in the name of the rector, and taking them to pawnshops," he was "publicly chastised before all the scholars as an example." Afterwards he was for some time at Curaçao and preached there, but was "sent away."⁶ Coming to the newly settled town which stood in need of both minister and schoolmaster, and himself compelled to make a living, he naturally sought to fill these positions. But, if his ecclesiastical critics are further to be credited, "he behaved most shamefully here, drinking, cheating, forging other people's writings, so that he was forbidden not only to preach, but even to keep school."⁷ This last statement seems to corroborate the supposition that he did teach in the school at New Haerlem.

Riker supposes that Willem de la Montagne, brother of Jan de la Montagne, master of the 1652 "trivial school" at New Amsterdam, succeeded Ziperus early in 1663; but offers no documentary proof,⁸ and apparently feels that his supposition is hardly more than suggestion. The records of December of that year, however, afford some definite information. The inhabitants of the little village "having

¹ Riker, *op. cit.*, pp. 176-7.

² *Ibid.*, pp. 18-23.

³ See pp. 197, 204.

⁴ Riker's *New Harlem*, p. 189.

⁵ *Ibid.*, pp. 177-8.

⁶ Eccl. Rec., p. 514. Letter of the classis to D^r Drisius, Dec. 15, 1661.

⁷ *Ibid.*, p. 555. D^r Drisius to the classis, Aug. 5, 1664.

⁸ Riker, *op. cit.*, pp. 189, 278.

seen from Sabbath day to Sabbath day the small and insignificant success of the public gatherings, and believing confidently that everything relating to the public worship may be brought in better training and all be more properly ordered by the services of a salaried voorlezer and schoolmaster, to read God's word and edifying sermons, keep school, catechize and visit the sick," sought "to persuade Jan de la Montagne, a resident of the said place, to undertake such services provisionally for the least possible salary." Montagne, whom we have met before as the rector of the trivial school, was inclined to consider the request; but the people "perceiving their present inability and incapacity to give in the aforesaid case a full and proper salary, and not having been able to collect for his support more than 24 schepels of grain,"¹ applied on December 25 to the director general and council requesting that they "in their usual noble discretion" would "contribute something towards a decent salary." The appeal was not in vain. On January 10, 1664, the director general and council decided to "accept and appoint thereto the proposed person, Johannes la Montagne, junior; and in order that he may attend to these offices with greater diligence, to him shall be paid annually on account of the company the sum of fifty guilders."² Montagne accepted the work under these conditions and served satisfactorily until October 23, 1670.³ During this whole time he acted also as secretary to the village court. It is of interest here to note that a school was provided before the church was fully and independently organized, and before the church building had been erected.

What is now called Kingston was at first Esopus and later Wiltwyck. In the fifties a good many families moved into that general region. A letter to the classis reported in 1657 that "they held Sunday meetings, and then one of the other of them reads from the Postilla."⁴ In 1658 Stuyvesant, on account of dangers from the Indians, persuaded the "sixty or seventy Christians" living scattered about to make a stockade village for protection. About this time the Lords Directors appointed Andries Van der Sluys voorlezer, but Stuyvesant held up the appointment. Accordingly, Van der Sluys wrote Stuyvesant (Sept. 28, 1658) to learn what should be done. "I need the position very much," Van der Sluys wrote, "the inhabitants here would like to keep me in the office, to proclaim the Lord's gospel according to my ability and catechize the children and teach them reading and writing; but because the honorable general has spoken to them about a preacher, therefore they dare not and can not engage me for several years."⁵ There is no record of Stuyvesant's reply; but a reference in the Kingston records (Feb. 12, 1664) to Van der

¹ About 18 bushels.

² Riker, *op. cit.*, pp. 207-8.

³ *Ibid.*, p. 269.

⁴ Eccl. Rec., p. 398. The Postilla was a book of sermons and prepared lessons.

⁵ N. Y. Col. Doc., xiii, 91.

Sluys as the former "voorlezer"¹ makes it reasonably probable that he did undertake the work at least temporarily.

The next man to be considered in connection with this school is Jacob Joosten, later to be met at Albany and Flatbush. Whatever uncertainty may attach to Van der Sluys's connection with the school, there can be none as to Joosten's. The fifth marriage record (1662) in the Kingston church records is as follows:

Jacob Joosten, j. m. [bachelor] of Raagh on the Moesel in Duystant, precentor and schoolmaster here, and Arriaentjen Verscheur, of Welp, in Gelderland, widow of Marckes Leendersen, resid. at Fort Orange. Married at Fort Orange. Banns published in Wiltwyck: first, 6 Aug.; second, 13 Aug.; third, 20 Aug.²

Joosten had been at Wiltwyck at D^r Blom's first communion service, December 25, 1660;³ it accordingly was an easy inference that his service as master had begun not later than this first communion. Some six months later, when the village court was organized, Joosten was, at the first meeting (July 12, 1661), appointed messenger for the court and church at an annual salary of 200 guilders seawant, the appointment subject to Stuyvesant's approval.⁴ The conjunction of court and church duties in this one office, especially as interpreted by the subsequent marriage record, is almost proof that he was at this time also schoolmaster.

The charter of Wiltwyck, given May 16, 1661, contains the first distinctly educational provision noted in these village charters. The court was empowered to adopt, subject to approval by the director general and council, "orders, respecting public roads, inclosure of lands, gardens, or orchards, and further, what might concern the country and agriculture; so, too, relative to the building of churches, schools, and other similar public works, as well as the means from which, and in what manner, these shall be regulated."⁵ One of the Wiltwyck laws promulgated by Stuyvesant at the time of granting the charter contains an interesting commentary on the times: "No one to propose a religious dispute under a penalty of three days in jail on bread and water."⁶

The source of the 200 guilders salary paid to Jacob Joosten as messenger of the court and church is probably indicated in a report made in 1662 of the village income, which (adapted) reads in part as follows:

From 525 morgens at fl. 2.10 st. per morgen	fl. 1,312. 10
The house lots, not paying land tax	136
The excise on wine and beer, farmed out	669. 5. 6
The revenue is altogether	2,117. 16. 6 ⁷

¹ Holland Society Year Book, 1887, p. 130.

² R. R. Hoes, Baptism and Marriage Register of the Old Dutch Church of Kingston, p. 500.

³ John C. F. Hoes, The First Reformed Protestant Dutch Church of Kingston, p. 2.

⁴ Schoonmaker's History of Kingston, p. 27.

⁵ N. Y. Col. Doc., xlii, 198.

⁶ Schoonmaker, *op. cit.*, p. 27.

⁷ N. Y. Col. Doc., xlii, 229.

On April 25, 1664, the court complained that the requirement that the director general and council approve its ordinances worked hardly, "as during the winter season no news can be obtained from here for 4 or 5 months;" it therefore prayed that its ordinances might without previous executive approval be provisionally enforced concerning, among other things, "the building of churches, schools, and such other public works and the finding and raising the means thereto required." The petition further asked, "as it has been found that the schoolmaster is making rather absurd demands for school money from the children, which compels many people to keep their children at home, that your honorable worship will grant him a fair salary."¹

The response to this request is not known. Probably Joosten had found the 200 guilders insufficient salary and had sought to raise the tuition fees. It appears that he continued for some time afterwards to hold the school. Pratt quotes a secondary authority to the effect that Joosten taught from the fall of 1660 to 1665, when he was dismissed for disobedience.² So far satisfactory verification has not appeared.³

An instance of the interest of the West India Company in the village appears in the fact that when Domines Blom and Selyns were coming over to New Netherland in 1660, the Lord Directors wrote Stuyvesant: "To carry on the service some books are sent over, which your honors will hand to them, besides the small psalters, prayers, and catechisms to be distributed and used as proper under the community in each respective place for teaching."⁴ Whether this means that the Lord Directors furnished the initial supply of books for the use of the minister both for public service and private teaching; or whether the school children used these "small psalters, prayers, and catechisms," is not very clear. The latter view seems more probable.

Stuyvesant's Bouwery, the country seat of the director general, was situated within the present city of New York, about where the church of St. Marks-in-the-Bowery is now. The well-known New York street, the Bowery, derives its name from the name applied to the little village which sprung up around Stuyvesant's farm or bouwery. The interest of the gruff old governor in his bouwery extended both to church and school. When in 1660 an effort was being made to collect an adequate salary for D^r Selyns, who was to preach principally at Brooklyn, Stuyvesant offered "to pay to the company two hundred and fifty guilders yearly towards the salary of the said Domine Selyns on condition that the Domine shall preach

¹ N. Y. Col. Doc., xiii, 369-370.

² *Op. cit.*, p. 51.

³ That Joosten remained in Wiltwyck seems indicated in the following facts: In 1662 he participated in a land drawing (N. Y. Col. Doc., xiii, 230); in 1663 a daughter was baptized in the Wiltwyck church (Hoes, *op. cit.*, p. 3); and in 1665 he was appointed guardian at Wiltwyck of a child left an orphan there (Holland Society yearbook, 1897, p. 124).

⁴ N. Y. Col. Doc., xiii, 155.

at his Honor's bouwery on Manhattan Island on Sunday evenings."¹ There is extant a long letter from D^r Selyns about his new work, telling us among other things that "the Bouwery is a place of relaxation and pleasure whither people go from Manhattan for the evening service. There are there forty negroes * * * besides the household families. There is here as yet no consistory * * * at least one deacon if not an elder ought to be chosen."²

The coming of Evert Pietersen to the New Amsterdam school and the consequent displacement of Hobocken gave Stuyvesant an opportunity of providing his bouwery with a schoolmaster. A council minute of October 27, 1661, recites that Hobocken sought to be employed again in one or another manner in the company's service, and he was accordingly made a petty officer in the company's troops, and allowed "ten guilders per month, and g. 175 for board," about half of what he had previously received from the New Amsterdam school. The minute further states that "whereas the aforesaid Harman is a person of irreproachable life and conduct, so shall he be employed on the bouwery for the director general as schoolmaster and voorlezer, with the condition that the director general, whenever his service might be wanted for the company as soldier, shall replace him by another expert person."³

Whether we are to conclude that Hobocken's new appointment under the company was purely a sinecure, or whether Stuyvesant detailed an officer of the company to act as schoolmaster on his private place, or whether some more favorable explanation is to be sought, does not now appear. But surely the terms of the appointment appear odd.

That the school continued under Hobocken's care until as late as April 28, 1663, appears probable from an acknowledgment before a notary of that date, in which there is a reference to "Master Harmen van Hobocken as deacon at the bouwery of the Hon'ble Petrus Stuyvesant."⁴ The use of the appellation "master" (three times repeated in the document), undoubtedly refers to Hobocken's service as a schoolmaster, and probably to contemporaneous service. Several later references showed his continued presence in the colony. He was either witness at the baptism of children or himself had children baptized in 1663 (Dec. 16), 1664, 1666, and 1668.⁵ In the first and last of these he has the "M^r" prefixed to his name, which would indicate that he was still teaching. We may then easily suppose that he continued with Stuyvesant until the surrender, and possibly for several years thereafter.

One wonders whether the children of those 40 negroes attended Hobocken's school. Some have supposed that they did. We may

¹ N. Y. Col. Doc., xiv, 479.

² Eccl. Rec., pp. 488-489.

³ Pratt, *op. cit.*, p. 17.

⁴ Minutes of the Orphan Masters, ii, 44.

⁵ N. Y. Gen. and Bio. Soc. Coll., ii, 71, 73, 83, 91.

be fairly sure that Stuyvesant's children did not attend, since it was about this time that Aegidius Luyck was brought over as a private master. But, however it may have been as to Hobocken's pupils, it speaks well for the Dutch in general and for Stuyvesant in particular that so small a place should have a regular school.

Bergen, though now a part of New Jersey, was at the time of settlement included within New Netherland. It was laid out in 1660 by Jacques Cortelyou. For the sake of protection the settlers were required to concentrate their dwellings. About 30 families moved in during the first year. On September 5, 1661, a court was granted in which occurs the identical provision relating to churches and schools that we saw in the Wiltwyck charter.

Jan Tibout was made court messenger apparently at the organization of the court.¹ Since this service was frequently joined with the office of schoolmaster, and since Jan Tibout afterwards taught for many years at Flatbush, Harlem, and Bushwyck, it would seem on the face of it quite possible that he was the first master at Bergen. As, however, there is no known corroboration, the suggestion must remain as a mere possibility. However it may be as to Tibout, we know that some time before the expiration of the first year of corporate village life, one of the schepens had appeared before the director general and council requesting in behalf of the community that "We might have a precentor, who could also keep school for the instruction and education of our young children." Their honors favored the plan, possibly helping with the salary, and proposed "one Engelbert Steenhuysen as a suitable person." The schout and schepens "repeated this proposition * * * to the community, which resolved to employ him not only as a precentor, but also this was expressly stipulated—to keep school. The said Steenhuysen accepted this * * * for which he was allowed a salary of 250 guilders in wampum² annually and some other enrolments besides the school fees, considered fair and proper."

Were it not that a dispute soon arose over the right of the village to tax the schoolmaster, we should not have learned even of the existence of the school during those early days. It seems that about 15 months after the school had been in operation, certain soldiers were quartered on the town. Each family was to maintain one. Steenhuysen, the schoolmaster, declined to receive one, whereat the "majority of the community" complained, feeling that since Steenhuysen was the "owner of a house and lot and of a double bouwery in the jurisdiction of the village" he should pay his part. "This," in the words of the plaintiffs in the suit, "has aggrieved the said Englebert Steenhuysen so much that he has resigned his

¹ Winfield's Hudson County, p. 85.

² Worth then about 125 guilders in coin, or 50 dollars.

office, asserting that a schoolmaster should be exempt from all village taxes and burden, as it is customary, he says everywhere in Christendom." The schout and schepens demurred to this plea, thinking that it might be valid, "when the precentor has only the school lot, but not when a schoolmaster owns a lot and double bouwery." The plaintiffs further urged that Steenhuysen was obligated "also to select himself and provide a fit and convenient place to keep school in", which, they said, "he has failed to do until this day, pretending the community must designate and provide such a place fit for a schoolhouse". Lastly the petitioners were of the opinion that Steenhuysen could "not resign his office, without giving a notice of six months of intention to do so." The director general and council were, therefore, called upon to settle these questions. All parties being "summoned before the council and heard, the parties were made to agree after divers debates and it was arranged that Englebert Steenhuysen should duly serve the rest of his term according to contract."¹ Whether he was required to quarter the soldier in his house or furnish the schoolhouse the records do not state. At this point ends our knowledge of the Bergen school during the Dutch period.

The town of Boswyck, or Bushwick, is now a part of Brooklyn. Stuyvesant himself in 1660 selected the site for the village, at the request of several French families, who wished to settle in that general region. A year later, when the town contained 23 families, there was established a court consisting of three schepens. Adriaen Hegeman was to act as schout for this as well as for the other Dutch towns on Long Island. In the same year the church was organized.²

On December 28, 1662, "the schepens of Boswyck came before the council and represented that they required in their village a suitable person to act as voorleser and schoolmaster to teach the children." Boudewyn Manout from Crimpen on the Leck had been proposed as such a person. They had made an agreement with him that he should act as voorleser and also keep a school for the "instruction of the children." For these services he was to "receive a year salary of four hundred florins in wampum and free lodgings." They asked that the director general and council approve their action and that the company "contribute something towards the salary every year." By vote, the director general and council approved "the engagement and contract made with said Boudewyn Manout, on condition that the same be first examined by the reverend clergy of this city and declared fit for the performance of the said duties." It was further agreed to pay "on behalf of

¹ N. Y. Col. Doc., xiii, 818-9.

² Corwin's *Manual of the Reformed Church in America* (4th ed.), p. 43.

the company twenty-five florins, heavy money * * * to said Boudewyn, to make the payment of the salary more easy."¹

Unfortunately, the Dutch records of this town are only partially available, so that little can be added to this meager account. Manout remained for a full year, and apparently till the English occupation.² Two things are worthy of note, the smallness of the place and the promptness with which they established a school. The 23 families of 1661 had increased by 1675 to only 36 families. The school was arranged before the village had entered the second year of its corporate existence.

New Utrecht, another Long Island village, was surveyed and laid out in 1657 by Jacques Cortelyou. It did not prosper, having only 12 houses in the beginning of its fourth year, when a charter was granted. For many years it was smaller than Amersfoort and about the size of Boswick. No deacon or elder was elected for the church until 1677.³ Nothing has been found to indicate whether it had a school during the Dutch period. As other small towns had applied to the director general and council for help with their schools, the absence of any such petition from New Utrecht may indicate that there was no effort to organize a school. But one can not be sure either that no such petition was made or that an inference therefrom of no school would be proper.

This ends the list of Dutch towns and villages, 11 chartered towns (including New Amsterdam) and one not chartered (Stuyvesant's Bouwery village). Of these all but two, Amersfoort and New Utrecht, are known to have had schools during the Dutch rule. Whether or no these two had schools then can not now be said. The *argumentum e silentio* must be allowed some weight, but it does not give certainty.

Below appear in one conspectus the facts regarding these villages: the date of settlement, the date of charter, the date of the first public school, and the population at the time of the organization of this school. Many of the data are confessedly uncertain.

New Amsterdam. Settled 1625; governed from the first directly by director general and council; chartered 1652; first known public school, 1638; population at that time, possibly about 400.

Beverwyck (Albany). Settled finally about 1630; governed by local court from 1632;⁴ chartered by Stuyvesant, 1652; first public school, 1650 or 1651; population in 1643, about 100. (Grew rapidly after 1650.)

Breuckelen. Date of settlement can hardly be assigned; chartered, 1646; first public school, 1661; population (1660), 31 householders, 134 people.

¹ N. Y. Col. Doc., xiv, 519.

² Bushwick town record book (1660-1824) *passim*.

³ Flatbush consistory minutes, p. 93.

Van Rensselaer-Bowler MSS., p. 208

Midwoud (Flatbush). Settled about 1652; chartered, 1654; first known public school, 1659; population at that time possibly slightly larger than Brooklyn.¹

Amersfoort. Settled apparently in the forties; chartered in 1654; no school known until after the English occupation; population small, in 1657 consisting apparently of 17 families,² in 1675 of 36 families.³

New Amstel. Settled, chartered, provided with a public school all at one time (1656-7); population, about 200.

New Haerlem. Settlement begun, 1658; chartered 1660; first school possibly by 1660, certainly by 1664; population (1661), 32 male adults; remained for years about the same.

Wiltwyck. Settled (as a village), 1658; chartered, 1661; first public school probably in 1658, almost certainly, 1660; certainly by 1662; population difficult to estimate; Dr. Blom's membership increased in three years (1660-3) from 16 to 60.⁴ If proportion of members to families was same at Breuckelen, this would mean an increase from 21 to some 77 families.

Bergen. Settled, 1660; chartered, 1661; first public school, possibly 1661, certainly by 1662; population (1660), "about thirty families," in (1662) apparently 38 families.⁵

Boswyck. Site selected, 1660; chartered, 1661; first public school, 1662-63; population, in 1661, 23 families, in 1675, 36 families.

New Utrecht. Laid out, 1657; chartered, 1661; no school known to have been organized during the Dutch period; population in 1661, "twelve houses," in 1675, 29 families.⁶

Stuyvesant's Bouwery. Private country seat of Peter Stuyvesant, bought in the late forties; never chartered; first known school (whether public or private not clear), 1661; population (1660), "forty negroes" * * * besides the household families."⁷

The schools organized in the chartered villages were all of one type. The schoolmaster was also voorlezer and sexton (except for a time at Beverwyck), and was besides court messenger or town clerk (except at New Amstel). The master received a salary and tuition fees. While it is not expressly so stated, except at New Amsterdam, we may believe that "the poor and needy who ask to be taught for God's sake" were taught "for nothing." While there were no rich, there were, however, few poor in the villages. Besides the salary, a free dwelling for the master seems to have been well nigh universal. The source of the salary varied. At Midwoud the rent from certain "school lots" in time furnished the whole. In early days there and at other places throughout the period quite likely town rates or subscriptions, more or less compulsory, were arranged. The town court, if the village were autonomous, felt itself mainly responsible. No instance of a specific school levy has appeared during the Dutch period, though several cases presented themselves where apparently the schoolmaster received part of a general levy (or compulsory subscription). Quite likely a town

¹ Compare N. Y. Col. Doc., xiv, 379 f. with *ibid.*, ii, 596.

² N. Y. Col. Doc., xiv, 378 f. Compare also *ibid.*, ii, 596.

³ Doc. Hist. of N. Y., iv, 100.

⁴ Eccl. Rec., p. 534.

⁵ N. Y. Col. Doc., xiii, 232-3.

⁶ Doc. Hist. N. Y., iv, 102-3.

⁷ Eccl. Rec., p. 488.

excise was generally utilized in making up the total village revenue. In three cases the company, through the director general and council, assisted the village with the salary of the schoolmaster.

Control seems to have been exercised in the autonomous villages jointly by church and local court. At New Amstel we may believe that the city of Amsterdam, which furnished the salary, also directed the affairs of the school. At that place only (excluding New Amsterdam), and that only in the case of Pietersen, did the classis examine and certificate the master. At Boswyck the master was examined by the ministers of New Amsterdam, as a prerequisite to receiving the company's bounty. Where no money was received from the company, no sort of control or interference was exercised by the central authorities.

On the whole it appears a just generalization to say that the Dutch village in New Netherland reproduced as nearly as could be the parish school of the mother country. The village school of New Netherland was an elementary school, open alike to girls and boys, and giving instruction in reading, writing, and religion.¹ Tuition was charged, the master receiving in addition a salary from the public. Master and school were alike under the joint control of the local magistracy and church.

¹ These statements as to coeducation and as to the curriculum are discussed in Chapter XIV.

CHAPTER IX.

THE NEW YORK CITY SCHOOL, 1664-1674.¹

The New Amsterdam city school was continued throughout the first English occupation unchanged, except in respect to the salary and its source. Paucity of records forbids a full treatment; the principal information chiefly concerns Evert Pietersen and his effort to secure a salary from the city.

The English took possession on September 8, 1664.² The terms of capitulation were designed to make the transfer as easy as possible. All public houses should continue for the uses of which they had hitherto existed. The Dutch were to "enjoy the liberty of their consciences in Divine worship and church discipline." "All inferior civil officers and magistrates" were to continue in office "till the customary time of new election."³ The English governor, Richard Nichols (1664-1668), evidently felt it his duty to make the English yoke as light as possible to the conquered Dutch. So that by the terms of surrender and by subsequent governmental policy the Dutch life continued much as before. Their church was subsidized, and was in many respects the established religion of the city. We shall see that the same was substantially true of the school.

On October 11, 1664, one month after surrender, "Mr. Evert Pietersen, schoolmaster of this city" came before the city court, asking, "as his allowance from the company is shut off, that burgo-masters & schepens shall be pleased to keep him at the same allowance." The worthy court answered: "Petitioner shall have to be patient for the space of eight days, when his petition shall be disposed of."⁴ At the next weekly session of the court, Pietersen attended in order to learn the result of his petition; but was told "to wait still a day or two."⁵ Pietersen, however, was not ruined in pocket by the failure of the court to vote him a salary, as a contemporary tax list shows. Certain soldiers were to be quartered on the city by assessment of the burghers and inhabitants. There were 254 names in all on the rate list. The highest assessment was 4 florins, paid by Hon. Petrus Stuyvesant and each of 12 others. Fifty-two

¹ The title of this chapter is slightly inexact. When the English took New Amsterdam (1664), they changed its name to New York. When the Dutch regained the city (1673), they chose for it the name of New Orange. The chapter title ignores the use of the name New Orange during 1673-74.

² Eccl. Rec., p. 561.

³ N. Y. Col. Doc., II, 250-3.

⁴ Rec. of N. A., v, 137.

⁵ *Ibid.*, p. 142.

names on the list were exempted entirely. "Mr. Evert Pieterzen," residing on Brewer Street, and Ægidius Luyck, on Winckel Street, were each assessed 1 florin. The average rate was about 1½ florins, while the median was one florin.¹ Evidently the schoolmasters were about of medium wealth and income.

Over six months after Pietersen's first salary petition had gone in, he appeared before the court (April 25, 1665) to know what had been done; "whereupon he was informed that it with other petitions was shown and delivered to the Hon. Governor Nichols, who has postponed the matter until his return."² More patience was required. But Pietersen was equal to the demand. This time he waited for five months, when (September 19, 1665) "Mr. Evert Pietersen, schoolmaster and precentor of this city" presented a petition, "requesting that he may have some proper fixed salarium, as he was heretofore paid his wages by the Hon^{ble}. Company, and has been continued in his employment from that time to the present." He was told that an order was shortly to be made "relative to the salary of the ministers of this city, under which the precentorship also comes;" and that proper order would then be made on his petition.³

A year had now passed since the English came. The school had been continued as the official city school with the former Dutch master as the "schoolmaster and precentor of this city." The Dutch church was now recognized as an official church; its ministers and voorsanger were now promised grants from the government. But patience was yet necessary. This time Pietersen waited five other months, until the ministers had been granted their salary; then he appeared before the court (February 20, 1666), reminded the magistrates of their promise of "the 19th of 7^{ber} last," and requested that a "suitable allowance be granted to him." "The w. court having heard the petition decree absolutely that he shall receive some satisfaction from his service. But whereas the city treasury is at present so low, that the said daily expenses can scarcely be met, the petitioner is requested to wait yet a while."⁴

A year and a half gone and nothing but promises yet. But Pietersen was not the only sufferer. "Att a Court held at New York" May 8, 1666, "Casper Steinmets entering demands payment of a year's rent of his house hired to the city as a city school, due on the first of this month; amounting to the sum of fl. 260." And again the same old response: "Petitioner is requested to wait yet a while, as there is at present no money in the chest."⁵

In this bill for rent we see the continuance of the custom begun with Hoboken in 1656 of renting at the expense of the city a building for the city school. Several times before have we met the

¹ Rec. of N. A., v, 221-3.² *Ibid.*, p. 231.³ *Ibid.*, p. 294.⁴ *Ibid.*, p. 340.⁵ *Ibid.*, vi, 4.

expression "the schoolmaster of this city," but, so far as the writer has noted, this is the first use of the expression "city school."

It was almost two years before Pietersen again brought up the salary question. Of course, there is always the uncertainty as to the fullness of the records, but the records for this period are apparently complete. On the "28th of April A° 1668 * * * Mr. Evert Pieters appearing, requests the W. Court to allow him something for the service performed by him as precentor to this date and also for the future. The W. Court promise to speak hereof to the Hon^{ble} Governor."¹ Speaking to the governor apparently did no good. Finances were at low ebb. The arrangements made about the salaries of the ministers, previously mentioned, were far from satisfactory. D^r Samuel Megapolensis wrote a friend in 1668 that the manner in which these were collected was "unpleasant and degrading, and altogether unusual in our Dutch nation. They go around from house to house to collect the salary."²

Four years after his first appearance Pietersen came again before the court (Feb. 16, 1668-9, delivered an account of his earned salary, and requested payment for the past "and further allowance for his future services: If not, he says he will leave." The worm had turned at last. The patience of even Mr. Evert Pietersen was exhausted. We hope the "Mayor's Court" was duly impressed, and we should like to record that they did something. But no, action was not to be expected of this body. Perhaps resolving was all they could do; at any rate, they "resolved to speak to the Governor hereupon."³ What the governor did we can not say. But Pietersen did not, at all events, leave town. On the contrary, on June 16, 1669, he got married.⁴ Perhaps it was anticipation of increased need for a salary that had made him speak so insistently to the court. The school, moreover, was continued, for the next year (Apr. 20, 1670) Casper Steinmets again appeared in court asking for "payment of fl. 100 seawant balance due for rent of the city school." From Steinmets' preceding request we learn that this annual rent was due on May 1. We should judge, then, that the school had continued to May 1, 1669, at the least. We may add that the treasurer was "ordered to pay Steinmets out of the first incoming monies."⁵

That Pietersen continued in the schoolroom even to the end of the period is made probable from the baptismal records of the Reformed Dutch Church of New York, on the pages of which "Mr. Evert Pieterszen Keteltas"⁶ or "Mr. Evert Keteltas" appears as witness during each of the years from 1667 to 1674, with the single

¹ Rec. of N. A., vi, 125.

² Eccl. Rec., p. 595.

³ Rec. of N. A., vi, 168.

⁴ With the coming of the English, surnames became more common among the Dutch,

⁵ N. Y. Gen. and Bio. Soc. Col., i, 33.

⁶ Rec. of N. A., vi, 221.

(probably accidental) exception of 1672.¹ This use of a title customary with the schoolmasters is hardly to be accounted for on any other supposition than that Pietersen was serving continuously in the schoolroom during the time. This supposition finds apparent corroboration in a letter written in 1670 by the New York church to the classis: "On account of the continued incapacity of Domine Drisius * * * the usual prayers, and the word of God and a sermon are read by the chorister Evert Pieterse."² Further corroboration appears in a minute of the consistory:

December 16, 1686. In consequence of the advanced age of Evert Pietersen, Abraham De La Noy was appointed to act as Clerk, Chorister and Visitor of the Sick.³

If, now, Pietersen continued to serve as *voorsanger* (chorister) during the whole period, as these two records would indicate, it is a fair inference—since the offices were closely linked—that he continued also to serve as schoolmaster. The mutual corroboration of this consideration and that derived from the title "Mr." makes it all but certain that Pietersen did in fact fill the office of parochial schoolmaster during the whole period from 1664 to 1674.

One wonders whether Pietersen ever finally secured his promised salary. Unfortunately, the records do not tell us definitely. The following minute may throw light upon the question:

Att a Mayors Court held att New York the 17th day of January 1674 * * *

Upon the compl^t of Mr. Evert Pieters, that he cannot receive the money fl. 350 due unto him from Stoffel van Laer upon an assignment from the Late Mr. Mayor; The Court ordered that the s^d van Laer should make paim^t of the s^d assignm^t within the space of eight days.⁴

Why the "Late Mr. Mayor" had assigned an order of fl. 350 to "Mr. Evert Pieters" save on account of his teaching does not appear. Of course, the transaction may have been merely one of private business between the two men; but the more one thinks of it the more does it seem probable that the assignment was a debt of the city against Stoffel van Laer, and that it was given to Pietersen as part compensation for teaching service. In this matter, also, Pietersen was called upon to exercise patience. Stoffel van Laer did not heed the order given him. He paid neither in eight days nor yet in eight months. "On Xber the 5th, 1671," we find that "Upon the Complaint of Mr. Evert Pieters Itt is ordered that the sherif before the next court day shall cause the execution w^{ch} the s^d Evert Pieter-sen hath ag^t Stoffel van Laer to be Satisfyed or otherwise that

¹ In all, Pietersen's name appears 25 times in these records during a period extending from 1661 to 1677. In one instance he is "Evert Pietersen, schoolmr." (N. Y. Gen. and Bio. Soc. Coll., II, 62.) The title "Mr." is applied 23 times (*ibid.*, pp. 61, 64, 67, 70, 73 (*bis*), 75, 86, 87, 88, 92, 93, 96 (*bis*), 97, 100 (*bis*), 104 (*bis*), 105, 115, 126, 127). In one instance only (1673) is there nothing to indicate the office of schoolmaster. (*Ibid.*, p. 108.)

² Dunshee, *op. cit.*, p. 36.

³ Eccl. Rec., p. 610.

⁴ Rec. of N. A., VI, 278.

y^e Execution shall be Issued out agst the Effects of the Sherif himselfe." ¹ We may well believe that when the "effects of the Sherif himselfe" are thus jeopardized the execution would be satisfied. At any rate, we hear no more of the matter.

Before final action was had on the "assignment" just discussed, steps were taken by the church which seems to imply the promise of a regular support for Pietersen. In 1671 "y^e Offic^{rs} of y^e Reformed Dutch Church" in New York City petitioned Gov. Lovelace for permission "to make a Rate or Taxe amongst y^e Inhabitants, and those that shall frequent the Church * * * for y^e Maintenance of their Minister or Minist^{rs}, y^e Clarke, or other Offic^{rs} of y^e Poore, As also for y^e reparaçon of y^e Church." The governor approved the plan suggested and granted (Sept. 26) to "y^e p^rsent Elders and Deacons * * * full Power and Authority to make such a Rate or Tax, and to Levy the same." ² It seems accordingly well-nigh certain that beginning possibly about 1672 a rate was levied for the maintenance of the church, including the support of "y^e Clarke." This officer we must understand to be the voorlezer, who was of course Evert Pietersen. Whether the rate was levied upon all "y^e Inhabitants" without distinction, or only upon "those that shall frequent y^e Church," does not appear certain, but probably the latter. We seem to see in this event a transition from city support of the school during the Dutch régime to church support of the English period.

It may be added that in spite of every difficulty of salary collection Pietersen was by no means reduced to indigence. In 1674 his name appears on a list of the 62 "best and most affluent inhabitants" of the city, with 2,000 guilders to his credit.³ School-teaching seems to have been relatively more remunerative then than now.

In as exact detail as the records would permit we have now traced the history of the "City School" of New York during the period from 1664 to 1674. We saw it maintained by the city of New York under Evert Pietersen, the Dutch master, certainly until February, 1669, and very probably until the end of second Dutch régime. We saw that as late as April, 1670, the city was paying "rent for the City School." We found no absolutely certain proof that the city during this decade ever paid its schoolmaster a salary, but the probabilities inclined us to think that either the town or the church by assessment did pay something. We seem, in conclusion, warranted in supposing that the school begun apparently by Roelantsen in 1638 was continued without serious intermission as the official school of the town from that early beginning to 1674.

¹ Rec. of N. A., vi, 347.

² Executive Council Minutes, ii, 617-8.

³ See p. 108.

CHAPTER X.

THE SCHOOL OF THE REFORMED DUTCH CHURCH OF NEW YORK CITY, 1674-1776.

The facts relating to the school of the Reformed Dutch Church in New York City during the period under consideration have been so fully and—on the whole—so fairly given by Mr. Dunshee¹ that we need here present only a general survey of the period, with attention to certain points not fully discussed in that work.

The support of the Dutch church after the second English occupation was no longer an object of municipal concern. The Dutch school, which from the days of Roelantsen had been closely connected with the church, became—during the second English period—the concern of the church solely. Whatever salary the master received besides the tuition fees must have come from the church treasury; the consistory now formed the sole board of control; and the religious purpose of the school seems to have been even more strongly emphasized.

On account of the fragmentary character of the church records for the first half of the period under consideration, we can make few specific statements covering those 50 years. Indeed, what has just been said is rather from our general knowledge of the subject than from specific records.

The line of reasoning used in the preceding chapter would seem to show that Evert Pietersen continued in charge of the parochial school possibly until about 1687. The baptismal records give him the title of "Mr." as late as 1677.² In December of 1686, when Pietersen's health was failing, Abraham De Lanoy was appointed to act in his place as "clerk, chorister, and visitor of the sick."³ As these offices had, in accordance with the usual Dutch custom, been filled by Pietersen while he was acting as schoolmaster, it seems a fair presumption that he retained the school likewise until 1686, or at least so long as his health permitted; although it is a little strange that nothing is said about the school in the minute.

Some indication of the arrangements made by the church to supply the salary formerly given by the civil authorities is seen in a petition of De Lanoy, soon after he took Pietersen's place, that he might have the "fees for recording baptisms." The consistory, however, "resolved that the yearly allowance of 50 guilders for baptism as

¹ *Op. cit.*, pp. 35-59.

² N. Y. Gen. and Bio. Soc. Coll., II, 126, 127.

³ Dunshee, *op. cit.*, p. 36.

fees shall be made until the death of Evert Pietersen, but when he dies the fees for recording baptism shall be paid to petitioner."¹

While it was not so suggested by Mr. Dunshee, it seems quite probable that this Abraham De Lanoy succeeded Pietersen in the schoolroom and continued to hold the position until his death in 1702. The argument for this opinion, however, is rather circumstantial than direct. In 1668 De Lanoy had been by the mayor and council, "admitted as schoolmaster in this city."² His school at that time was supposedly a private one. Dankers and Sluyter refer in their diary to a visit made by them to De Lanoy's school in 1679. The quotation may prove interesting aside from the point at issue.

On my return home, the son of our old people asked me if I would not go to their usual catechizing, which was held once a week at the house of Abraham De Lanoy, schoolmaster * * *. I accompanied him there and found a company of about 25 persons, male and female, but mostly young people. It looked like a school, as indeed it was, more than an assembly of persons who were seeking after true godliness; where the schoolmaster who instructed them handled the subject more like a schoolmaster in the midst of his scholars than a person who knew and loved God * * *. They sang some verses from the psalms, made a prayer, and questioned from the catechism, at the conclusion of which they prayed and sung some verses from the psalms again. It was all performed without respect or reverence, very literally, and mixed up with much obscurity and error.³

During the period from 1681 to 1691, the baptismal records contain several references to "Mr. Abraham De Lanoy."⁴ As elsewhere in like connection the title "Mr." can hardly mean anything else than service in the schoolroom. Finally, his will dated August 3, 1702, begins "I, Abraham De Lanoy, of the City of New York, Schoolmaster."⁵ If De Lanoy taught thus continuously in the city from 1668 to 1702, if he was in 1686 appointed "clerk, chorister, and comforter of sick"—duties almost invariably given to the master of the school—if, furthermore, he succeeded the schoolmaster Evert Pietersen in these offices, the conclusion is easy—if not necessary—that he succeeded Pietersen likewise in the schoolroom. If De Lanoy was ever placed in charge of the parochial school, there is no known reason to doubt that he held the place as long as he taught at all; that is, until his death in 1702.

Should any object that a parochial school is not to be supposed in the absence of positive record showing its existence, the answer appears clear. As the Dutch were in the large majority during this earlier period, as they held tenaciously to their language well into

¹ Dunshee, *op. cit.*, p. 36.

² Rec. of N. A., vi, 115.

³ Long Island Hist. Soc. Coll., i, 134. It may be that De Lanoy had by this time already taken over Pietersen's school, but the probabilities point to the contrary. The criticisms here directed against De Lanoy must be taken *cum grano salis*.

⁴ N. Y. Gen. & Bio. Soc. Coll., ii, 152, 176, 192, 204.

⁵ N. Y. Hist. Soc. Coll., 1892: 342. On page 225 appears an inventory of De Lanoy's school books made just after his death in 1702.

the eighteenth century, as custom and ecclesiastic law alike required the churches to provide schools, as the continuous existence of the school from 1726, when the records recommence, is abundantly shown in the records—in the face of all this we can not doubt that during the whole period from 1674 to the Revolution the school was kept in fairly continuous operation.

Corroboration of the opinion just expressed is found in the charter granted to the New York City church in 1696.¹ In this, privilege was granted to the minister and elders and deacons to “nominate and appoint a clerk, schoolmaster, bell ringer or sexton, and such other offices as they shall stand in need of.” The same were further “authorized, from time to time, to make rates and assessments upon all and every one of the members in communion of the said church for the raising of money for the payment of the yearly stipends and salaries of the aforesaid officers of the said school.” The domine wrote the classis shortly thereafter that the contents of the instrument “in respect to the power * * * of choosing elders, deacons, chorister, sexton, etc., and of keeping Dutch schools, [were] all in conformity to the Church-Order of the Synod of Dort, Anno, 1619.”²

It may be of interest to learn something of the thoroughness of the catechetical instruction of this period. D^e Selyns, in 1698, sent to the classis a list of 44 boys and 21 girls who “had learned and repeated, or were ready to repeat, publicly, freely, and without missing, all the psalms, hymns, and prayers in rhyme, in the presence of” the “consistory and of many church members.” Apparently there was a contest, for D^e Selyns reports that “the girls, although fewer in number, had learned and recited more, in proportion, than the boys.” The average age of the children was 10 years, ranging from 7 to 14. The “regular Sunday prayer, which is made before the sermon, was recited without any mistake, and with energy and manly (*sic*) confidence, by Marycken Poppinga, a child of five years.” We need not be surprised that when the congregation repeated the prayer after the little girl, it was “not without tears.” The catechumens were evidently pleased by their feat, for they had a detailed report sent, not only to the Classis of Amsterdam, but also to the Dutch church of London.³

The disproportion in number of boys to girls in this contest quite possibly is indicative of a similar disproportion in the numbers that attended school. We shall see later that the proportion of marks made by women to men in affixing names to legal documents is in somewhat greater disparity than would be the school attendance indicated by these figures.

About the beginning of the eighteenth century the colonial governor, Lord Cornbury (1702–1708), “insisted that neither the ministers or

¹ Eccl. Rec., pp. 1136–1165.

² *Ibid.*, p. 1172.

³ *Ibid.*, pp. 1233–1240.

schoolmasters of the Dutch, although the most numerous persuasion in the Province, had a right to preach or instruct without his gubernatorial license."¹

At this time (1705) the Dutch church of New York City had no schoolmaster. Two Dutch masters, Goelet and Kerfbyl, who had "by personal petition" sought in vain for a license from Cornbury, now turned to the church, urging upon it the charter privilege of conducting a school.²

There was but one Dutch schoolmaster in the city of New York at the time, and the church felt the need of "another and still more of greater qualifications." "Our Voorlezer," so we read, "has made request twice in writing for this addition; and others with great urgency have insisted on it; but they were not able to secure anything." Cornbury, in defiance of the provisions of the church charter, declined their petition "to be allowed to have one more schoolmaster." The church, in apprehension that the congregation might grow less "from the decline of nurturing schools," made an earnest appeal "for the help and intercession of the rev. classis."³ Nothing, of course, could come from that source, but Cornbury's administration ended shortly thereafter; and no succeeding governor saw fit to repeat his oppressive measures.

In 1726 the records begin at length to give tolerably full accounts of the school. On January 5, 1725-6, Mr. Barend de Forest was appointed schoolmaster under the supervision of the consistory. The school by this time had come to be looked upon as of significance, principally, in training the children to take part in the church service. Although English was at the time recognized as "the common language" of the Province, and although the publication of De Forest's appointment before the congregation stated in so many words that "there can not but be a general agreement by each and all of us that it is very necessary to be versed in this common language, in order properly to carry on one's temporal calling;" still it was urged that "all who belong to the Dutch Reformed Church and have any regard for God, and prefer the worship of the Dutch Reformed Church, can not but see and acknowledge that * * * it is equally necessary for them to be versed in the language in which God's worship is conducted and exercised."

De Forest's contract stipulated that the master was "to obey strictly all such orders as shall be judged necessary for the advancement of the youth in the Netherlandish tongue, and in the first principles of the Christian religion." The children, "according to their ability," were "to be taught to spell, read, write, and cipher; and also the usual prayers in the catechism." "Every Monday" he was to appear "with all the children, at the public catechizing to

¹ Smith's New York, p. 172.

² Eccl. Rec., p. 1584.

³ *Ibid.*, pp. 1654, 1700.

test their ability and their diligence." On Wednesdays likewise, when there was preaching, he was to "attend the service with all the children." The school was in operation the year round, except on "Festival days" and Wednesday and Saturday afternoons. The hours were, "in summer, from 9 to 11 a. m., and from 1 to 4 p. m. In winter, from 9½ to 12½ a. m., and from 1 to 4 p. m." "None but edifying and orthodox books," such as the consistory might approve, should be used. The consistory paid for the teaching of "the children of indigent parents" at the rate of "nine pounds for ten children."¹ Only children above 7 years of age might take advantage of this free tuition.²

De Forest continued in charge until December 3, 1732, when misfortune came upon him. We read that on that date "there was presented to the consistory a written request from Mr. Barend de Forest, clerk in the old church, now a prisoner for debt, that the consistory would please become responsible for £50 or £60, and continue him in his office, and * * * take one-half of his salary for debt and pay him the other half for his support." But after much consideration, the consistory declined the petition; and placed Mr. Isaac Stoutenburg, the assistant, in temporary charge "at the rate of £15 per year."

A few months later (March 21) "Mr. Gerrit van Wagenen (at present Foresinger in the Low Dutch Reformed Congregation at Kingstowne)" was named as "clerk and Foresinger" in the "so-called old church * * * and also to be the visitor of the sick for the whole congregation, and to keep school in the Dutch language, and finally to keep the books" of the church. Of these duties Van Wagenen's predecessors in office had apparently found that of visitor of the sick burdensome, for the third article of the contract sets out that, "as each one of the schoolmasters has had the duty of visitor of the sick, so you are to make no piteous scruples concerning the service (however weighty in itself), but render it as the ministers shall orally direct you." His salary is stated more explicitly than was De Forest's. As *voorsanger* and *sieckentrooster* he was to receive £15; "for the school teaching of twelve of the children of the poor" £10; "for keeping the books of consistory" £9; "four cords of wood" for use in the school room; for recording baptisms, "at least a half quarter, and as much more as the parties shall present you"; "for the first two years (and no longer), six pounds, yearly, New York currency, for his house rent." Besides all this, the consistory thought if he carried on his school "industriously," the citizens would send him "such a number of children" that altogether his salary would furnish "all adequate support" for his family.³

¹ "A pound here is equivalent to eight Holland guilders" (\$3.20). *Ibid.*, p. 2590.

² *Ibid.*, pp. 2337-2343.

³ Dunsbee, *op. cit.*, pp. 43-4.

The announcement before the congregation concerning the new régime at school expressed the hope "that the Christian congregation will be pleased to support the same for the general good for themselves and their children, by assiduously and in good number sending scholars to Mr. van Wagenen's school of orthodoxy." The religious function of the school, as expressed in the case of De Forest, was repeated here. The school was considered "absolutely necessary, useful, and salutary for the Christian rearing, teaching, and training of our youth, in order to gain them, from the earliest period, to the language of our church, and to a love for the Dutch reformed worship."¹

It is almost pitiable to see the blind zeal of the church leaders in resisting the spread of the English language. The closer the touch with Holland the blinder and more vehement the zeal. If there had been an early willingness to accept the inevitable, to translate the church service into English, and to effect ecclesiastical independence from Holland, the numbers and wealth of this church at the present time would be vastly greater. But all the strength of the Dutch character seemed rooted in opposition.

In a "further explanation" of Van Wagenen's duties, made just before he took up the duties of schoolmaster, occurs the first certain specific reference to girls that the writer has found in connection with the Dutch schools of America. Certain catechism recitations were to be required of "the school children, both boys and girls." It seems reasonably sure that girls had been in school all the while.² That no earlier reference has been found is, however, certainly remarkable. In this "further explanation," it was provided that the master should "set none of the children of the poor to writing or cyphering, without the consent of one of the ministers."³ Why this should have been stipulated is hard to understand. It would seem that the poor were not to be encouraged to go further than reading.

Gerrit van Wagenen remained in charge for just 10 years. Upon his death Isaac Stoutenburg was appointed provisionally as clerk and recorder of baptisms. Possibly Stoutenburg was also schoolmaster; but this seems hardly probable, as in three months we find Huybert van Wagenen, the son of the former master, already for some time installed in his father's place as schoolmaster.

On November 21, 1743, it was decided to provide "another Dutch school." Mr. Abraham de Lanoy, second of the name,⁴ was to be paid for teaching "ten children of poor parents in our congregation, who live too far, especially in winter, to come to the school of Mr. Huybert van Wagenen." Mr. de Lanoy was to "catechize the chil-

¹ Dunshee, *op. cit.*, p. 46.

² See p. 217.

³ Eccl. Rec., p. 2626.

⁴ See p. 147.

dren in the new church, and Mr. van Wageningen in the old church."¹ Abraham de Lanoy continued to teach from 1743 to 1747, when he was succeeded by William van Dalsem, who taught until 1757. Upon his death in that year this second school closed.² Mr. Huybert van Wageningen continued to serve as schoolmaster at the old church apparently until 1749, when Daniel Bratt was called from a similar position at Catskill to be chorister and schoolmaster.

Master Bratt's contract was for five years. As chorister he was to receive "twelve pounds, ten shillings, New York money," besides the baptismal fees. As schoolmaster he was to have a dwelling house and school, and £12 10s. for teaching "twelve free scholars, six in reading and six in writing." For each scholar he was to receive a load of wood, "half nut and half oak."³ Later the number of "free scholars" was increased to a maximum of 20. Apparently Mr. Bratt was not successful, for we find the consistory notifying him 13 months in advance that he must retire when his five years should expire.⁴ Some of this haste may have been due to the resentment felt by the consistory that Mr. Bratt should have rented out a portion of his house, an act felt by them to be "to the prejudice of the church."⁵

At this point the school history must take account of a long and bitter ecclesiastical struggle within the Dutch churches of America. One party was anxious to adapt the church more fully to American conditions, desiring in particular to secure ecclesiastical independence of Holland and to introduce the use of the English language into the church services. The other party opposed both innovations with a zeal as determined as it now appears blind. Interestingly enough the reactionary party was strongest in New York City, with D^r Ritzema of the old church as its admitted leader. In connection we may quote Hamilton, who says, in his famous *Itinerarium* (p. 107), of the Dutch of New York City in 1744: "Now their language and customs begin pretty much to wear out, and would very soon die were it not for a parcel of Dutch domines here who, in the education of their children, endeavor to preserve the Dutch customs as much as possible."

We have already noted that 25 years before the English language had been publicly admitted to be necessary for commercial purposes, although the Dutch language had been counted "absolutely necessary" for the church service. Evidently this dualistic arrangement could not be permanent in a country where the English language was officially established and the English-speaking population was being so rapidly recruited. The older members of the church, however,

¹ Eccl. Rec., p. 2829. It may be noted that about this time the church owned considerable property at the Manor of Fordham, including a schoolhouse, which the consistory felt bound to keep in repair. No reference, however, appears to oversight by the consistory of a school kept there. *Ibid.*, p. 2969.

² Dunshee, *op. cit.*, pp. xvi, 51.

⁴ *Ibid.*, p. 3337.

⁵ Eccl. Rec., p. 3025.

⁶ *Ibid.*, p. 3357.

could not recognize the inevitable. Knowing the Dutch language themselves, they could not see why the young people should not continue in the old paths. Many of the younger Dutch people, on their part, not understanding the public services as conducted in Dutch, united with English-speaking congregations to the "visible decay" of the Dutch churches.

In 1754 William Livingston issued a series of articles under the title of the "Independent Reflector," in which he especially opposed the growing strength of the Episcopal party. In the first number in order to rouse the Dutch he discussed the "visible decay" of the Dutch churches, and attributed it to "the too long continued use of the Dutch language." "The Dutch tongue, once the common dialect of this province, is now scarcely understood, except by its more ancient inhabitants." "The churches have kept exact pace with the language in its retrograde state." To prevent this he admits that the greatest pains had not been wanting. "They have had well-regulated free schools richly supported by their churches, and yet maugre their utmost efforts parents have found it in a degree impossible to transmit" the language to their children. "To prevent, therefore, the ruin of the old Dutch churches, common sense pointed out the absolute necessity of disuniting them from the language" that was dragging them down.¹

However strongly such a statement might appeal to the unprejudiced, it could only arouse to more determined opposition such a reactionary as D^r Ritzema. The schools, he admitted, had failed to preserve the old state of affairs; but that was because they had failed to do their duty. The fault was with them; they must be made better. We accordingly find D^r Ritzema writing to Holland in behalf of his consistory, saying that they had "long lacked a suitable schoolmaster and chorister to the manifest injury of the youth as well as of worship." The church had accordingly "finally resolved to incur the trouble and expense of sending for one to Holland."²

This plan of bringing over a Holland master would not only have the merit of adding prestige to the school—no recalcitrant parent among the Dutch need hereafter claim that he could not afford to patronize the church school, "to the injury" of his children; but besides it would secure an ally to the Dutch party. A man who knew no English would not surreptitiously spread that commercial language, and certainly he would not favor loosening church ties with Holland. So determined was Ritzema's party for the plan to succeed that they offered "such compensation as almost doubles what any one in this service has ever before enjoyed."

¹ Independent Reflector, January, 1754. In view of these undoubted facts it is interesting to see an advertisement in the New York Gazette Post-Boy (Apr. 1, 1751) by one Klockhoff, offering to teach "reading and writing in Dutch, French, and Latin."

² Eccl. Rec., p. 3530.

"The qualifications demanded in such a person" were that as a chorister he should understand the art of singing, have a voice to be heard, and have "the gifts to instruct others in the art;" as a schoolmaster he should be "a good reader, writer, and cypherer," and he was to be "not under twenty-five nor above thirty-five years of age." "The emoluments offered to such a person" were "a free dwelling, new and commodious." In which "besides the large school room there is a small parlor, a large kitchen, two chambers above, a cellar under the house, and behind the house a kitchen garden, a well with a pump, and many other conveniences. This house would bring an annual rent of twenty pounds, New York currency."¹ In addition, he should receive fifteen pounds annually for leading the singing; twenty-four pounds for instructing "twenty poor children in reading, writing, and cyphering;" "fire wood for these children, six pounds yearly;" for keeping the church books, eight pounds; baptismal fees, at least seven pounds; and "besides these an annual salary of twenty pounds." "To this may be added that the school is open for the children of all the citizens." "As there is no other suitable school of the Holland Dutch in the city," the master might expect from this source "at least forty pounds more."² The combined income from all these sources, including house rent, would be £140, New York currency, or \$350, which was much above what most schoolmasters received at the time. We may note that the total number of pupils contemplated would be about 45, as we may reckon from the scale of tuition fees fixed by the consistory.³

It took nine months to get such a master, but on November 9, 1755, "Mr. Johan Nicolas Welp, with his wife and children, all in good health" arrived from Amsterdam. The consistory was pleased with his testimonials and "resolved to pay him eight pounds for his freight and waste of goods from New London here, besides the fifteen pounds promised for the expenses of his voyage."⁴ Nor was this all. "Considering the loss which Mr. Welp suffered in the sale of his goods, in consequence of his removing from Amsterdam at short notice, the consistory made up among themselves a present of twenty pounds, which he very gladly received."⁵

In spite of all this lavishness the effort to stem the oncoming tide of Americanizing influence was in vain. From 1743 there had been two Dutch schools, but two years after Mr. Welp came, the "ten children taught by the late Mr. van Dalsem were allowed to Mr.

¹ "One pound New York currency is a little more than six guilders and twelve stivers," that is, about \$2.50 (1755). Eccl. Rec., p. 3531.

² *Ibid.*, p. 3530 ff.

³ "Mr. Welp was allowed to claim for his instruction of the children per quarter: For reading only, five shillings; for reading and writing, eight shillings, and six pence for pen and ink; and ten shillings for cyphering; and six shillings for those who learn singing." Consistory minutes, Nov. 16, 1755. Eccl. Rec., p. 3621.

⁴ Consistory minutes. *Ibid.*, pp. 3614, 3641.

⁵ Letter of Dr. Ritzema Dec. 29, 1755. Eccl. Rec., p. 3642.

Welp provisionally."¹ Provisional as this was, it marked the last of the second school. Later Mr. Welp's salary was reduced to "£16 above his income" from tuition and other fees.² In the meanwhile agitation for an English-speaking minister had been successfully made, though only against determined opposition.³

In a letter of January 10, 1763, written by the consistory to Holland asking for an English-speaking minister, the decay of the Dutch language is pathetically set forth: "We have daily the mortification to see the offspring of the wealthiest members of our congregation leave our divine worship, not being able to apprehend what is taught." "There is scarce a principal family in this city and even in our own church whose children clearly understand the Dutch language."⁴ In 1765 Mr. Welp came before the consistory and "stated that the deacons had decided that they could not continue him on the same footing upon which he had before stood—receiving from them £16 above his income. He therefore humbly asked, inasmuch as the Dutch school was so poor, and his recording the names of baptized children had also greatly diminished, that the consistory would please to provide some other way. This the consistory considered favorably, and ordered that inasmuch as he had been appointed catechist and consoler of the sick, the £16 should on this account be allowed him."⁵ Even if we do not here admit that the baptisms had in fact fallen off, evidently the Dutch school was such a failure that Welp had to take up the offices of catechist and siecken-trooster in order to make ends meet.

Not only did the Dutch school fail of its purpose to keep alive the Dutch language, but there was strong effort to organize an English school, of higher grade. "A proposal was made by Mr. Jacobus van Zant to establish a Latin and English grammar school under the direction of our consistory. * * * This was agreed to by the majority."⁶ A subscription was begun "to build or hire a suitable schoolhouse," but "for important reasons"—unknown to us now—the matter was delayed, and apparently came to nothing.

In the meanwhile the opponents of English preaching had not been reconciled. In 1767 they made a lengthy appeal to the colonial governor to redress their alleged wrongs. (Among the petitioners was Huybert van Wagenen who had previously served as schoolmaster.) The seventh grievance alleged in the appeal was "that the Dutch school is not taken care of by the rulers to the total ruin of the

¹ Consistory minutes, Aug. 22, 1757.—Dunshee, *op. cit.*, p. 51.

² Eccl. Rec., p. 3983.

³ It was asserted by the opponents of the English party that "even Rev. Ritzema once avowed that rather than allow an English minister to speak in our church he would lay his head upon the block and say 'Cut it off.'" Eccl. Rec., p. 3880.

⁴ *Ibid.*, p. 3854.

⁵ Consistory minutes, Mar. 21, 1765. Eccl. Rec., p. 3983.

⁶ Consistory minutes, July 29, 1765. *Ibid.*, p. 3999.

Dutch education.”¹ The answer made by the school authorities to this seventh alleged grievance was “that we have at present and for twelve years past have employed Mr. Welp, who was sent for to Holland as a schoolmaster and catechist; he keeps a school constantly open, receives payment from us for teaching the poor children of the congregation to the number of thirty, which number never was completed; he is a person very well qualified to catechise and teach school, and we pay him a very handsome salary for his service, insomuch that his place is coveted by others.”²

That not 30 poor children cared to avail themselves of free education in the Dutch language is sufficient commentary on the folly of trying longer to keep up a school exclusively in that tongue. The deacons seem to have accepted this view; for we find them requesting that the catechists be discharged because their salaries could not be raised “without injury to the poor.” The consistory, however, would not agree to the plan. But later they withdrew from Mr. Welp the £16 allowed him as a catechist and as visitor of the sick; “for he is not in a condition, owing to bodily infirmity, to bear the burden” of these offices.³ This action in the case of an ill man seems a little hard; but perhaps we do not know enough to judge. When Mr. Welp died, some three years later, the church was more liberal. They canceled a debt against his estate of £5, paid his funeral expenses, allowed the family to continue in the church house for some months without charge, and gave the widow an annual pension of 20 pounds.⁴

In 1772 there was contributed “a sum of five and seventy pounds, eight shillings, as the beginning of a fund for the erection and maintenance of a public school, to be set up by the consistory.”⁵ We hear nothing more of this prior to the Revolution. Quite likely the example of the Trinity Church School, which was now receiving many bequests, incited these members of the Dutch church to like activity.

When the consistory came to elect a successor to Mr. Welp, they recognized, as we have it in their own words, that “the Dutch language is constantly diminishing and is going out of use.” They therefore “deemed it proper to call a person who is qualified to instruct and educate the children in the English as well as the Dutch language.” The person selected for this was “Mr. Peter van Steenbergh, at present schoolmaster at Flatbush on Long Island.” The instructions given are quite similar to those that we have previously examined. “For the instruction of 30 poor children” he was to receive £60; “firewood for one year, £8;” “books, paper, ink, quills, etc., for one year, £5; for the care of certain church chambers, £8.”

¹ Doc. Hist. of N. Y., iii, p. 309.

⁴ *Ibid.*, pp. 4259, 4262.

² Eccl. Rec., p. 4106.

⁵ Consistory minutes, Apr. 23, 1772. *Ibid.*, p. 4240.

³ Consistory minutes, Apr. 30, 1770. Eccl. Rec., p. 4184.

"For your encouragement, you shall have a dwelling house and garden free, and also a good room for the school." "It shall be allowed you to instruct as many other children as may offer themselves to you, but not beyond the number of 30, and also to keep an evening school."¹ Mr. Steenbergh accepted the proffered place and continued in charge as "the public schoolmaster of this congregation" until "the commencement of the war," when the school suspended operations.²

The consistory at this time decided to build a schoolhouse at a cost not exceeding £400.³ "With its dependencies, however, the final cost was £856:15:1½."⁴ When the house was finished, the consistory adopted some rather interesting rules regarding the free scholars:

1. No boy shall be received under nine, and no girl under eight years of age.
2. No child so received shall remain in the school longer than three years, so as to make room for new ones; yet if no new ones be hindered thereby they may remain.

Children of the church members were to be given preference. The consistory should make a public visitation to the school every quarter, while the elders and deacons should go monthly "to see what progress the scholars are making."⁵

The last school reference prior to the Revolution is in a consistory minute of March 6, 1774, which states that the deacons were appointed a standing committee in relation to the poor children who are now maintained in the school."⁶ Mr. Dunshee states (p. 94) that the school from its origin to 1808 was "under the supervision of the board of deacons." One hesitates to differ from Mr. Dunshee on a point which would seem to lie so peculiarly within the scope of his knowledge, but the evidence hardly bears out the assertion. The reference just above given is an illustration to the point. The consistory, not the deacons—so far as appears from the records—settled every question relating to the school from 1674 to the date of the last-quoted reference. It is true that the deacons seem to have been peculiarly charged with the care of the church finances, and in this capacity we find them making recommendations to the consistory touching the school. In only one instance—when De Lanoy was asked to teach 10 poor children—does it appear that the deacons first acted without a special authorization. But in this case they "took the first opportunity to make this known to the meeting (of the consistory), expecting that it would be approved."⁷

¹ Eccl. Rec., p. 4261.

² Consistory minutes, Sept. 7, 1784. Dunshee, *op. cit.*, p. 65.

³ Eccl. Rec., p. 4262.

⁴ *Ibid.*, p. 4272.

⁵ Consistory minutes, Aug. 6, 1773. *Ibid.*, 4264-4265.

⁶ *Ibid.*, p. 4276.

⁷ *Ibid.*, Nov. 21, 1743. *Ibid.*, 2829.

We have now traced the history of this the oldest school in New York from 1638 to the Revolution. There is no reason to suppose that at any time within this period was the continuity of existence broken. While it ceased in 1674 to be the official city school, it nevertheless retained throughout the whole colonial period of nearly a century and a half its connection with the Reformed Dutch Church of the city.

We may suppose, though the evidence is not abundant, that until the early decades of the eighteenth century the school remained uniquely the established elementary school for the Dutch-speaking population. With the spread of the English language the usefulness of the school evidently declined and became more and more a charity school, although that name was not applied until after the Revolution.¹

We noted the ineffectual effort to use the school to perpetuate the Dutch language. The presence of the two languages in New York City must have operated to the injury of the cause of education within the city. For the greater portion of the period under consideration the inhabitants of Dutch descent were in the majority. Their whole previous history both in Old and New Netherlands had made the church and the municipality, conjointly, the proper guardians and support of public education. In colonial New York, however, these two worked at cross purposes. If the municipality was to support any school, it must be for the teaching of English. The church, however, would support only Dutch schools. The great mass of the Dutch population could not give exclusive support to an education which served one day of the week only, ignoring the economic demands of the other six. Nor on the other hand could they, under the leadership of their ministers, feel cordial interest in a municipal school which would not merely ignore the church but would apparently wean the youth away from its influence. As a result of these conflicting interests the English apathy toward public support of education, instead of the Dutch custom of municipal schools, became the established policy of New York City during the colonial period.

We can never cease to regret that the splendid interest of the Dutch in education and the powerful force of their customary support of municipal schools should have been to so great a degree lost through the inability of their religious leaders to accept the English language as an inevitable necessity. Had the system of municipal schools been retained after 1674, giving instruction, however, in both languages, the transition from the Dutch to the English language could have been made with greater ease and with far less hurt to the Dutch church; and New York City would have gained a full hundred years in the development of its school system.

¹ Dunshee, *op. cit.*, p. 65.

CHAPTER XI.

THE SCHOOL OF NEW HAERLEM AFTER 1664.

As we saw in Chapter VIII, Jan de la Montagne was schoolmaster in New Haerlem at the beginning of the English occupation. This position he held until October 23, 1670,¹ when he resigned. What his salary was under the new régime, or how it was collected, does not appear. To judge from what happened later, voluntary subscriptions furnished the greater part of the salary. The village was still small, the church in 1665 consisting of only 23 resident members.

In 1667 was erected a building primarily for church purposes but used also as a schoolhouse, having, moreover, a loft from which rent was sometimes collected. This seems so remarkable a compound of church, school, and finance, that we should doubt the statement did not the records plainly assert that the deacons, with the consent of the magistrates and community, let at public auction "the loft over the church or schoolhouse."² This seems to be one case where the schoolmaster did not live in the schoolhouse.³

We have said above that Montagne resigned October 23, 1670. To be exact, this was the date when his successor, Hendrick Jansen Van der Vin, was elected.⁴ The term of Van der Vin's service was fixed at three years. His salary for services as schoolmaster and voorlezer was "f. 400 yearly in seawant or in grain at seawant price," and also a dwelling house, with 60 loads of firewood. This last was furnished by the inhabitants, three furnishing 12 loads each, and four, 6 loads each. The salary was made up principally by subscription, Montagne, the outgoing master, subscribing 10 florins, 7 stivers. In order to help with the salary the town lot, garden, and meadow were leased for six years at 120 florins a year, in seawant or grain at seawant price.⁵

After one year's trial of the subscription plan, a tax was authorized to raise Van der Vin's salary, "calculated $\frac{2}{3}$ on the lands and $\frac{1}{3}$ on the erven (town residence lots); amounting for each morgen to f. 1: 12: 6, and for each erf. f. 6: 7." But, notes Montagne on the margin of the court record, "It came to nothing." As yet the

¹ Riker, *History of Harlem*, p. 269.

² *Ibid.*, p. 285. The quotation marks here are Riker's, from which we infer that the quotation itself was taken from the now hidden town records.

³ But see p. 162.

⁴ Riker surmises (p. 277) that Arent Evertson Molenaer may have served temporarily between Montagne and Van der Vin. Apparently there is no documentary proof of this.

⁵ *Ibid.*, p. 269. This salary (f. 400 seawant) was about equal to 40 dollars.

people were not ready for school or church taxes.¹ Nor were they entirely willing to pay the voluntary subscriptions. We find in 1673 the court, at the request of the *voorlezer*, directing the sheriff to collect the salary as per list of "free-will contributors."² What success the sheriff found in collecting the salary we do not know.

On November 1, 1673, Van der Vin was reelected for another three years on the same terms as before, with the additional stipulation that the people should keep the house and garden fence in repair. The salary was to be paid half-yearly in grain at market value, and "according to the old list of free-will contributors." This list has been preserved. On it are 18 names, of whom, however, only 14 actually subscribed for the 1673-1676 term. The subscriptions range from 4 to 30 florins, and average about 16 florins. Besides subscriptions, "the town allotment" was rented for 120 florins annually, and "the meadows" at 35 florins, 1 stiver. The total amounted to 406 florins.

This second contract with Van der Vin was signed during the short return of the Dutch to power in 1673-74. The transition of government had been made easily. The Dutch governor sent the village a new charter, bringing back the old court of *schout* and *schepens* selected by the double nomination system common among the Dutch. The ninth section of the charter authorized the *schout* and *schepens*, "for the peace and tranquillity of the inhabitants in their district, to make any orders" (subject to proper approval) respecting highways, etc., "also for the observance of the Sabbath, respecting the building of churches, of schools, and similar public works."³ A report made to the Dutch governor at this time states that New Haerlem contained 16 householders, 22 males between 16 and 60 years of age, and a few males above 60. Of the 22 males of military age, 3 were Englishmen and 8 were "young men" (i. e., unmarried).⁴

When the Dutch gave back the colony (Nov. 10, 1674), it was apparently judged necessary to renew the contract with Van der Vin. The terms were the same as previously. This time 18 people subscribed, of their free will, sums ranging from 3 to 38 florins, the average being about 15 florins. Two declined to subscribe, claiming exemption on account of difference of religion.

In October, 1676, Van der Vin complained that his house was no longer fit to live in. Accordingly the town decided that for the winter they would move him into the schoolhouse or church after it

¹ Riker, *History of Harlem*, p. 276.

² *Ibid.*, p. 287.

³ *Ibid.*, pp. 305-6. The same charter was sent simultaneously to some 29 other villages in New Netherland. O'Callaghan, *Laws of Netherland*, p. 476 ff.

⁴ Riker, *op. cit.*, pp. 286, 301-302.

should be repaired and adapted to his purposes, by putting in a bedstead,¹ chimney and mantel, and making the door and windows tight. It was further decided "to repair (vermaeken) the old house the following spring."²

We have several times called attention to the "free will contributions" by which the voorlezer was paid. It appears that there was in this practice a considerable element of compulsion in spite of the descriptive adjective. In 1676 two of the French inhabitants persisted in a course of not subscribing to the voorlezer's salary; one had failed to subscribe for three years and the other for two years. The matter was referred to the mayor's court at New York, which had jurisdiction, and on November 7 an order was passed that "the Clerk of the Parish be continued in his place, and have his pay what is behind, and for the future as formerly."³ There is so much indefiniteness in this order as to cause no surprise that the delinquents still held out in spite of many formal demands on the part of the local court. As the constables hesitated to use force, the matter again came before the mayor's court, which on March 6, 1677, issued the following order:

From the City of New York to the Town of Harlem:

The Court order, that Hendrick Jansen Vander Vin, the clerk of the said town be continued in his place according to former order, and have his pay, what is behind and for the future as formerly by the inhabitants; and if they or any of them refuse to pay what is due from them for the time past, and for the time to come, then the constable is hereby ordered to levy the same by distress and sale of the goods, for satisfaction of what is or shall hereafter become due to the said clerk.⁴

From this distance, even this second order seems vague as to the precise question at issue. We might even suppose that the city court meant to rule solely as to the salary due Van der Vin in his capacity as town clerk, leaving out of account his work as voorlezer and schoolmaster. The local court, however, did not take this view of the decision; and it does not seem to have occurred to the defendants to escape by that precise plea. When the summons for payment was issued in accordance with the court ruling, the answer was returned that Gov. Lovelace had said, "the French of the Town of New Harlem should be free as to contributing to the Dutch Voorlezer," now that they had a French minister. The local court would not accept this plea and directed execution against the defendants for the amounts due and the costs. After further efforts, one of the defendants paid up; but the other proved obdurate. Apparently nothing further was done to enforce payment.⁵

To use the term "free-will contributions" not only in connection with the forced collection of subscriptions already made, but even in

¹ Riker says "bedroom," but puts in parentheses "bedstede," which in Dutch means bedstead.

² Riker, *op. cit.*, p. 333.

³ *Ibid.*, p. 334.

⁴ *Ibid.*, p. 335.

⁵ *Ibid.*, pp. 334-5-6.

connection with compulsory subscriptions, seems at this day entirely anomalous and self-contradictory. But one familiar with the period under consideration will recognize in the incident and in the terms used a normal stage in the development of public rate support of church, school, or poor out of a preexisting true voluntary contribution. The evolution has typically gone through three stages, first, a voluntary contribution, second, a contribution freely made if possible, forced if necessary, and third, a formal rate levied equitably upon all by the duly constituted public authorities.¹ New Haerlem at the time under consideration was evidently in the second period of the evolution. If events should proceed normally, a purely rate-supported school would result.

On February 7, 1678, the question of salary again came before the court. We read:

Is further resolved and concluded that the magistrates shall go about among the common inhabitants and see how much each is willing to contribute yearly, to the maintenance and salary of the voorlezer, beginning the 23rd of October of the previous year, 1677, and following. The voorlezer must have yearly for salary, according to agreement entered into the 23rd of October, 1670, the sum of 400 guilders; the magistrates remain held to furnish the money.²

There seems a little suggestion of threat in the closing clause of the resolution: If the money were not subscribed a tax levy might be made. As a result of the canvas "among the common inhabitants" 20 subscribe, not including the two recalcitrants. The amounts are much as formerly, varying from 6 to 40 guilders, with an average of about 13 guilders. The rents, however, are hardly more than half, so that only 342 guilders were available. When this deficiency was duly considered, Van der Vin agreed (May 8, 1678) "to the constable and magistrates" to be content with the sum available for that one year, provided that "the constable and magistrates shall then make a new and reliable assessment for the full sum of 400 guilders yearly as salary, according to the first accord of 23d of October, 1670."³ The word "assessment" in the resolution seems to indicate that the evolution of a tax rate was progressing rapidly, at least in the minds of the court.

Probably part of Van der Vin's willingness to take the reduced salary was due to a promise of the court to provide a new house. At the same meeting it was "also taken into consideration about the rebuilding of the town's house for the voorlezer; it is found good to take the work in hand by the first opportunity, as the most necessary work to be done by the inhabitants, and they having leisure to properly hew and make ready the timber for the same." The court im-

¹ For the evolution of poor support in England, and of church and school support in colonial Massachusetts see Jackson, *Development of School Support in Colonial Massachusetts*, pp. 10-11, 18, 20, 73, *et passim*.

² Riker, *op. cit.*, p. 348.

³ *Ibid.*, p. 350.

mediately called into the meeting a carpenter and asked of him an estimate. "Demands 200 guilders; whereupon it was not ordered, but the magistrates said they would think upon it and inform him when they should be able to have him do it." Four months later (September 7), "the constable and magistrates, with the advice of the whole community" contracted for the necessary timber for 130 guilders; "to wit: 5 beams twenty feet long, broad in proportion; 12 posts ten feet long; 4 sills twenty-two and twenty feet long, 2 rafters, 2 girders, 1 other spar, all twenty-two feet; also split shingles for the roof; all finished to deliver at the stump."¹ Apparently it took three or four years to finish the house. There is still in existence a detailed account giving many of the expenses, and the rate list by which the necessary funds were raised.² Twenty-six landowners were assessed amounts varying from 5 guilders 8 stivers to 104 guilders and 19 stivers, the average being about 31 guilders. The 800 guilders so raised does not, apparently, represent the whole cost of the house.

After this, our records grow less definite. Van der Vin died about the first of 1685 at the age of 70. Says Riker:

As he lives in the work of his pen, Van der Vin shows his culture, and incidentally his knowledge of Latin and Spanish. He was remarkable for his accuracy, very methodical and precise in small as well as greater matters, clerk of the court, both drafter and registrar of deeds, wills and contracts, accountant for the town and church; all these added to his specific duties as *voorlezer* and schoolmaster, it is amusing to find minuted in his clear, neat hand, "set hen to brood, 15th July, 1675."³

In the early part of January, 1685, Jan Tibout, who had been dismissed from Flatbush for conduct unbecoming a *voorlezer* and schoolmaster (p. 173), was invited to succeed Van der Vin in these offices. But by the ecclesiastical comity (if not more positive regulation), he could not be admitted to the proffered place until he had been relieved of the censure laid upon him by the Flatbush church. Thither he accordingly sent his request with a testimonial from D^r Selyns "minister of N. York and N. Haerlem aforesaid, wherein it was stated that during the two years that Jan Thibald had passed under the ministry of N. York, nothing was heard of him except what beseemed an honorable man." Upon this showing, the Flatbush consistory was prevailed upon (Jan. 16) "to remove the said Jan Thibald from censure * * * that he may enter upon the service to which he has been called."⁴

On January 20, Tibout accordingly entered upon the duties recently laid aside by Van der Vin. His salary was 300 guilders; he and his family were to occupy "the town's house."⁵ The collection of Tibout's salary again raised the question of forcing citizens of another faith to support the Dutch *voorlezer*. In 1686, one John Delavall, a Quaker, was indebted to the town "for stone, timber, lime, and

¹ Riker, *op. cit.*, p. 351.

² *Ibid.*, pp. 372-3.

³ *Ibid.*, pp. 392-3.

⁴ Flatbush consistory minutes, p. 62.

⁵ Riker, *op. cit.*, p. 393.

morgen money, 236 florins (for the new church); for two years salary of voorlezer, 95 florins; for quit rents, 32 florins." Being a Quaker he had conscientious scruples against supporting the faith of the Dutch, so the town levied on 61 schepels of wheat belonging to him. An early American example of "passive resistance."¹

On April 23, 1690, Tibout yielded his position to Guiliam Bertholf, who in turn served only about a year and a half, leaving September 13, 1691.² Tibout then returned and stayed, so it appears, for six or eight years, after which he is said to have gone to Bushwick.³ His successor was Adriaen Vermeule, from Vlissingen, Zeeland, who entered upon his duties November 4, 1699. Riker says, "judging from his penmanship, he was a scholar." Upon the coming of Vermeule the town built "a new house, as a dwelling for the voorlezer, and as a school and a town house."⁴ Vermuele remained for eight years, when he was "requested to be voorlezer at Bergen," and was dismissed with commendation on January 1, 1708.

Following this there is a break in the records of a few years, after which Johannes Amsterdam van Harlingen, was chosen to act as voorlezer, and with his service end our records. He stayed apparently for several years.⁵

We have now traced the school at New Haerlem for a period of over 50 years. From 1664 to 1708 there was no serious break in its operation. The master all this time was supported in major part by means of "freewill contribution," which approximated rate assessments. We need not doubt that tuition was also charged. The town furnished a school house and a dwelling for the master. Part of the time the master lived and taught in separate houses, and part in the same house. During the whole period⁶ the schoolmaster was voorlezer in the Reformed Dutch Church as well as schoolmaster, and besides acted as clerk of the town court. We have no reason to doubt the moral and religious character of any one of the schoolmasters unless we except Jan Tibout, and he was said to have reformed. The record of New Haerlem, as here given, provokes praise. For the greater part of the period under review the village numbered less than a score of families. But this small group, out of its limited means, moved by no external pressure, maintained a village school with unfailing regularity, paid the schoolmaster a fair salary, and furnished him with a free dwelling. In no other instance did the Dutch interest in education manifest itself more strikingly.

¹ Riker, *op. cit.*, p. 406.

² *Ibid.*, p. 407 n. Bertholf had previously been a cooper, and later became a minister. Eccl. Rec., 1051, 1073.

³ Riker, *op. cit.*, p. 408 n. Cf. Bushwick town record book (1660-1825), pp. 113-9.

⁴ Riker, *op. cit.*, p. 407 n.

⁵ *Ibid.*, p. 408 n.

⁶ Except possibly the break at 1711-12, when Morris was trying to introduce Episcopalianism. Eccl. Rec., pp. 1743, 1949. Dix, *op. cit.*, i, 176-7.

CHAPTER XII.

THE SCHOOLS OF FLATBUSH AFTER 1664.

The records available for Flatbush are fuller than for any other of the Dutch villages, affording accordingly the best account that we have of any of the village schools.

The Flatbush school was opened, as we saw, not later than January of 1659. The first master is not known. In 1660 Reynier Bastiaensen van Giesen was elected, and he was succeeded by Pelgrom Clocq, who was appointed schoolmaster October 26, 1663, "for one year and the engagement to be released on either side each year." The English came in September of 1664, some time before Clocq's first and only year had expired.¹

Clocq's successor was "the worthy Arent Evers Molenaer, late schoolmaster, precentor, and comforter of the sick at New Amstel," although it appears that a slight interim came between the two. Since Clocq's salary was paid for exactly one year, it seems probable that his time expired October 26, 1664, one year after his contract. Molenaer seems to have been in New Amsterdam after this time, since he had a child baptized there on November 9,² and he sold there, on December 10/20, his account against the city of old Amsterdam for services at New Amstel.³ We should probably not go far wrong to place January 1, 1665, as the beginning of his service at Midwoud. In March of 1665, "Mr. Arent Molenaer" bought a farm "in the vicinity of the town of Midwoud."⁴ On April 3 "Arent Evert Molenaer" witnessed a paper.⁵ On August 16 of the same year the deacons paid to "Aerent Aeeveresen" their share of his first year's salary, 50 guilders.⁶ In June of the succeeding year the church paid its part of the second year's salary to "Aert Evers."⁷ From

¹ Strong (History of Flatbush, p. 109-110) gives a continuous list of masters from 1659 to 1802. The names that he assigns to the seventeenth century are as follows: Adrian Hegemen, 1659-71; Jacob Joosten, 1671-73; Francays De Bruynne, 1673-74; Michael Hainelle, 1674-75; Jan Gerrit van Marckye, 1675-80; Derick Storm, 1680-81; Jan Tibout, 1681-82; Johannes van Eckkellen, 1682-1700. It will be observed that neither Van Giesen nor Clocq appear on Strong's list, while no evidence is available that even tends to connect Hegemen with the school. On account of further inaccuracies in the list, it is necessary to pay more attention to names and dates than would otherwise be desirable; our resulting list will be very different, so far as concerns the seventeenth century.

² N. Y. Gen. and Bio. Soc. Coll., li, 75.

³ Minutes of the orphan masters, etc., li, 4.

⁴ Flatbush town records, 105: 21.

⁵ *Ibid*, p. 25.

⁶ Flatbush deacons' accounts, i, 13 ^A. It is assumed that his contract was the same as Clocq's.

⁷ *Ibid*, i, 14 ^A. See also Flatbush town records, 106: 252, 259, for payments made by the church masters from the rent of the school land.

these two payments of exactly 50 guilders each from the church, it seems quite probable that his term of service extended over exactly two years. This finds corroboration in the salary payments of his successor.

As Molenaer's term was closing (Dec. 15, 1666), the church masters paid out "for plastering the chimney in the school and the covering 11 gl., p. 10 st."¹ As this house was built only three years before (see p. 126), it may excite some surprise that it needed covering so soon. The use of thatch rather than shingles is probably the explanation.

Molenaer's successor was Jan Tibout, whom we have already met at Bergen (p. 137) and in New Haerlem (page 164) and shall meet several times in other connections. His contract is the first one found at Flatbush after the English occupation. His duties, while more nicely specified than were those of Van Giesen and Clocq, are almost the same. He was schoolmaster, voorlezer, voorsanger, sexton, and court messenger. Tuition charges were for A, B, C, and spelling, 2 guilders per quarter; for reading and writing, 2 guilders, and for both together, 2 guilders and 10 stivers. His salary was 300 guilders,² seawant, in grain, together with a free house, garden, and house lot belonging to the school. The service was to begin on December 25, 1666, o. s., and last for one year; though it was in fact continued for about four years. Interestingly enough this contract was signed by the court officials only, not by the consistory.³ What makes this change in the contracting parties the more interesting is that the schoolmaster's church duties are minutely prescribed, and that the deacons continued all during his term of office to pay the 50 guilders annually on his salary, just as had been done when they were parties to the contract. The regular salary payments made by the deacons and churchmasters of 50 guilders and 250 guilders, respectively,⁴ leave us in no doubt that Tibout remained in charge of the school until his successor came, November 1, 1670.

The successor to Tibout was Jacob Joosten, whom we have previously seen at Kingston (pp. 134-5). His contract was drawn up on August 8, some months in advance of the commencement of actual service. It is one of those long itemized school contracts which seemed to delight the Dutch sense of order and form. This is one of the very best of all the contracts we have, as it gives many minute details. Joosten, as contracting master, on the one hand, and the consistory and the town court, on the other, were parties to the contract. There are 12 articles, fixing among other

¹ Flatbush town records, 106: 259.

² Some \$30 or \$35 of our money.

³ Flatbush town records, 105: 87-89.

⁴ Flatbush deacons' accounts, 1, 15^A, 17^B 22^B; Flatbush town records, 106: 279; Flatbush churchmasters' accounts, pp. 4, 12.

things the school hours, the religious services of the school, the catechizing, the master's duties as voorlezer, as voorsanger, as sexton, and as messenger of the church and court. He was required by the sixth article "to be modest in his demeanor and diligent and patient with the children; also always calm and friendly to them." His remuneration came from several sources: For providing the bowl of water at baptisms "12st. from the parents or the witnesses," for inviting to funerals, preparing the grave, and tolling the bell, "for persons 15 years old or upward, 12 gl.; and under, 8 gl.," with more if he went out of the town to extend the invitations. As court messenger there was a regular schedule of charges. The seventh item fixed the tuition charges: "To receive in payment of A. B. and spelling, 2 gl.; of reading and writing together, 2 gl., 10 st.; for evening school, reading and writing, 3 gl." He was "to receive, in addition an annual salary of 300 gl. in wampum, or grain, to be delivered at the ferry; in addition a house free of rent, with a garden and use of lands belonging to the school, and annually from each farm one load of manure and one load of firewood or the value thereof, and next summer a new and proper dwelling house on the school lot." The time of service was for one year beginning November 1, 1670. "All done in the meeting of constables and overseers and consistory of the town of Midwoud."¹

Although the English had been masters of New Netherland for six years, this contract shows almost identically the same conditions as were found in the Dutch days. In certain respects more nearly the same than was seen in Tibout's contract of 1666.

The promise to provide "next summer a new and proper dwelling house on the school lot" bore fruit. The church masters contracted with one Auke Jansz to build "a house according to plan thereof and conditions thereof at his own board expense" for the sum of 600 guilders.² Either the old schoolhouse received at the same time new roofing, or the roof for the new house had not been included in Auke Jansz' contract, for 30 guilders were paid out for this purpose with 15 guilders besides to the hod carrier.³ Either the work on the schoolhouse progressed slowly, or some accident befell; for on January 30, 1672, the church masters spent 15 guilders "for one half barrell good beer for setting the school to rights."⁴ The Dutch, as well as other of the early colonists, performed such public works more willingly, if not more effectively, with the aid of plenty of "good beer." A year later some repairing was necessary, for there were bought "50 nails for the schoolhouse" at 15 stivers and the roof again needed attention, as roofs do.⁵

¹ Flatbush town records, 105: 207.

² Flatbush church masters' records, p. 14. On p. 19 of the same this was called the "schoolhouse."

³ *Ibid.*, p. 15.

⁴ Flatbush town records, 106: 283.

⁵ Flatbush church masters' records, pp. 21, 22.

The question of side occupations of schoolmasters was, as we saw in Chapter II, a matter of some concern in Holland. In America little was heard of the question. However, one of the items in the deacons' accounts seems to indicate that Master Joosten had a side occupation somewhat unusual. Just after he had given up his position in Flatbush the deacons bought for 35 guilders "that little brew house of Jacob Joosten next to the schoolhouse."¹ Ownership and proximity to his dwelling would seem to substantiate the suggestion that Joosten added to his income by brewing, perhaps, that same "good beer."

How Joosten received his pay as schoolmaster will appear from the following excerpt from the church masters' report. The reader will note the variant spellings of proper names.

Year 1673, credit—

Jan Burensen has delivered to Jackop Joosten 19 schepels peas..... gl. 76 -0

also delivered to Jackop Yoosten 9 schepels rye..... gl. 36 -0

also to Yackop Yoosten 2 schepels wheat..... gl. 12 -0

Van Beren has also delivered to Yacop Yoosten 3 schepels rye..... gl. 12 -0²

It was about this time that we have the first extant census of Flatbush. In 1673 there were 73 men in the village;³ but "men" here means apparently males of 16 and over. Two years later there were 54 heads of families.⁴ This number fell the next year to 47;⁵ in 1683 it was 48,⁶ in 1698, 66,⁷ while in 1706⁸ there were 52 landholders. The total population can only be estimated. In 1738 there was a white population of 406 in 76 families,⁹ or about 5½ persons to the family. The same ratio would give a population of 251 in 1676, 256 in 1683, and 352 in 1698—a relatively fixed population for a village in a new and growing country.

We have seen in Chapter VIII how certain lands were set aside during the Dutch period for the use of the Flatbush church and school. This was done several times again during the English period. In 1668 there was a division of the Canaryse Valley into eight divisions of six lots each. One lot each was reserved for the church, school, parsonage, and town.¹⁰ In 1701 there was a similar drawing, where the school got two lots.¹¹ It is impossible to make any distinction between church and school lots. While we read at times of the "church lots" and the "school lots," as if they were separate, quite as often they are all included together under the head of "church lots," and even where a distinction of term is made, we find rent from both going to the schoolmaster or to the schoolhouse.¹² Both were equally in the charge of the

¹ Flatbush church masters' records, p. 38.

² Flatbush town records, 106: 295.

³ New York Col. Doc., ii, 596.

⁴ Doc. Hist. of N. Y., iv, 97ff.

⁵ *Ibid.*, ii, 260ff.

⁶ *Ibid.*, ii, 293-4.

⁷ *Ibid.*, iii, 89.

⁸ King's County conveyances, liber 3, p. 195.

⁹ Doc. Hist. of N. Y., iv, 120. Besides the white population there were 134 negroes.

¹⁰ Flatbush town records, 105: 141.

¹¹ *Ibid.*, 100: 252 ff.

¹² *Ibid.*, 106: 81, 249, 252.

churchmasters. It may be added that according to the 1706 assessment, the church lots then included 262 acres, while the largest single private holding was 159 acres, the median holding being 63. In 1663, the church and school lands were rented out for six years at 400 guilders the first years, and 440 guilders each succeeding year.¹ In 1668 and 1669 they were again rented out at about the same rates.² Apparently this was the source of the schoolmaster's salary.

In 1676, on the same conditions that obtained in the case of Joosten, "constable and overseers with the consent of the people," engaged Jan Gerritsz Van Marken "in the place of Jacob Joosten." The only difference in the terms was that Van Marken should receive no wood and manure, but should "receive therefor the sum of one hundred guildens, making the entire about four hundred guildens in grain at seawant price." The service was to commence May 1, 1676, and last "for the time of one year or longer, as is satisfactory to both parties."³

Van Marken was evidently not an exemplary character. He is said to have been expelled from Fort Casimir whither he had gone as a merchant.⁴ He went thence to Beverwyck and bought the excise right.⁵ After becoming schoolmaster at Flatbush he had the reputation of paying "more attention to the tavern than to the school."⁶ Finally, a quarrel with D^r Van Zuuren of the Flatbush church proved his undoing. The domine, being for no sufficient (apparent) cause "most irreverently and slanderously abused by the schoolmaster," he "called together our consistory and, as is usual here, invited the magistrates to meet with them." These "all declared that they had long wished for some opportunity to discharge this schoolmaster,"⁷ and thereupon, after due deliberation, "the honorable consistory, in the presence of the worthy constable and overseers," decided that Van Marken was "unsuitable and unfit to have charge of the service of church or school in any Christian congregation," and accordingly discharged him, ordering him "to surrender the schoolhouse and all other privileges" of his office "before the 1st of May."⁸ The schoolmaster was much incensed at the treatment accorded him and fought back; "with the uttermost shamelessness, summoning those who had condemned his conduct, before the English court at Gravesend * * * accusing them of perfidy and injustice."⁹ D^r Zuuren's party retaliated with threat of a slander suit. In fear, however, that the English courts might abridge the rights of the Dutch church, both sides were prevailed upon to arbitrate the matter. Van Marken, as a result, was put under bond to keep the peace; but he forfeited this and

¹ Flatbush town records, 106: pp. 249, 252.

² *Ibid.*, 105: 117-8.

³ *Ibid.*, p. 208.

⁴ Pearson, *First Settlers of Albany*, p. 128.

⁵ Bergen, Kings County, p. 345.

⁶ Flatbush consistory minutes, p. 30.

⁷ Letter of D^r Van Zuuren to the classis, June 25, 1681. *Ecl. Rec.*, p. 773 ff.

⁸ Flatbush consistory minutes, p. 30.

⁹ *Ibid.*, p. 33.

was afterwards "imprisoned for his overbearing conduct."¹ He did not long survive the contest, dying in February of 1683, whether of choler or of excessive indulgence in drink is not stated.²

Van Marken's salary presents a problem. His contract, as we saw, was for 400 guilders a year. But the account show that the deacons paid him on January 29, 1677, "for his year's salary" 50 guilders. This was their pro rata according to what had been done since 1660.³ Besides this the churchmasters paid him the same year 500 guilders.⁴ The next year, the deacons (apparently) nothing, while the churchmasters again paid 500 guilders;⁵ while for the third year (1678) he received only 400 guilders "for one year's salary."⁶ The only explanation that at present suggests itself is this: That about the time Van Marken undertook the work, Dom^e Polhemus, the aged minister at Flatbush, became too feeble to carry on the work and shortly thereafter died. It was practically a year and a half that the church was without a pastor.⁷ During this time Van Marken, as voorlezer, would almost certainly be called upon to take charge of the church services. As this coincided with the first year and a half of his school service, we can easily believe that the extra 150 guilders his first year and the extra 100 guilders the second year were paid him for this extra work.

The relation of the church and the village municipal authorities in the control of the village school has all the while been an inviting problem. Van Marken's career presents several most interesting phases. Van Giesen and Clocq were each engaged by the "schout and schepens with the cooperation of minister and consistory."⁸ Tibout's, so far as form went, was entirely a matter of the court, the consistory being ignored.⁹ Jacob Joosten's contract was arranged in "a meeting of constable and overseers and consistory of the town of Midwoud."¹⁰ But when Van Marken was elected in place of Joosten, it was by the "constable and overseers with the consent of the people."¹¹ The consistory again was (apparently) ignored, though probably it was consulted, if not formally, at least informally. When now D^e Zuuren was wishing to get rid of Van Marken, he faced for the first time since coming to America the fact of the joint control of the school by the court and consistory, with the power of the court increasing. He seems then to have protested to the consistory that this was contrary to the

¹ Eccl. Rec., p. 786.

² Flatbush consistory minutes, p. 174; deacons' accounts, 1, 57^A.

³ Flatbush deacons' accounts, 1, 101^A, 101^B, 102^A, 102^B, 13^A, 14^A, 15^A, 17^B, 22^B, 28^B, 32^B, 33^B.

⁴ Flatbush churchmasters' accounts, pp. 36, 39.

⁵ *Ibid.*, p. 39.

⁶ *Ibid.*, p. 49. After the 50 guilders paid by the deacons on Jan. 29, 1677, we find no more record of their paying anything on the schoolmaster's salary (until 1711 possibly).

⁷ Eccl. Rec., pp. 688, 699.

⁸ Flatbush town records, 103: 24, 145.

⁹ *Ibid.*, 105: 87f.

¹⁰ *Ibid.*, 105: 207.

¹¹ *Ibid.*, 105: 208.

liberty of the Dutch church. We find in the consistory minutes (Feb. 16, 1680) a formal paper in the domine's own hand:

Since the church order of the Synod of Dordrecht, held in the year 1618 &c., enjoins that the consistories shall have control over the schoolmasters, as is seen in article 21,¹ the minister desired earnestly that they should govern themselves thereby, * * * The Dutch congregation ought not so to neglect their liberty. But in case they do not assert themselves he protested that he should have no part or guilt in these things or their complications.²

When a month later (March 21) Van Marken was dismissed from the school service the "action was taken in the church assembly of Midwoud *in the presence of* the honorable magistrates, constable, and overseers;" and similarly the resolution dismissing him was passed by "the honorable consistory *in the presence of* the worthy constable and overseers."³ Van Zuuren in writing the account of this meeting to the classis said, "I therefore called together our consistory, and as is usual here, invited the magistrates to meet with them."⁴ It is evident from all this that Van Zuuren himself was accustomed in the Netherlands to seeing the consistory control exclusively in such matters.⁵ Further, being a strong fighter, a pronounced churchman, and being, moreover, ready to despise American customs,⁶ he was determined to keep things in the hands of his consistory as far as possible.⁷ This decade marks the height of the power of the consistory in copartnership with the court. The tendency to democracy in America was yet to prove too strong even for such as Dom^e Van Zuuren.

On the 1st of November following Van Marken's dismissal the consistory and magistrates in meeting assembled were called upon to consider "that since the position of voorlezer and schoolmaster has now been vacant for more than half a year and no one has presented himself as a candidate for this service, whether it would not be appropriate to increase the compensation a little." The proposition met with approval, and the salary was raised from 350 to 400 gulden of grain at seawant value. "Thereupon, on the 4th of the same month Jan Thibald [Tibout] was accepted for this service." This is the same Jan Tibout who had previously taught at Flatbush (1667-1670). His service this time began on December 18, 1681.⁸ The terms of contract were quite similar to those already noticed in the case of Jacob Joosten. In particular, while the contract was signed

¹ For this article, see Eccl. Rec., p. 4220.

² Flatbush consistory minutes, p. 16.

³ *Ibid.*, p. 30. The words are Van Zuuren's own; italics, the writer's.

⁴ Eccl. Rec., p. 774.

⁵ See pp. 23 ff, where it is shown that such was not universal and probably not general in the Netherlands.

⁶ See his letters to the classis, Eccl. Rec., pp. 699-840, *passim*.

⁷ We shall later see (p. 194 n) a similar position taken by Dom^e Van Zuuren on the election of churchmasters by the town.

⁸ Flatbush consistory minutes, p. 39. This statement of the size of the former salary is irreconcilable with the known facts. It is possible that this action merely rescinds a proposed reduction.

by both consistory and court, the latter under the former, Van Zuuren's previous phraseology is used: "Done in our assembly of Midwoud *in the presence of* the honorable constable and overseers."¹ His school calendar, however, introduced several features not heretofore seen in the history of the Dutch schools. Item 4 of the contract presents them, reading as follows:

He shall be bound to hold school nine months in succession, from September to June, in case 16 children come to the school. He must be present in person and instruct the children and keep them in order. So far as the three summer months are concerned, he shall be excused from keeping school himself, if the number of school children does not reach twenty, in which case his wife may keep the school. Also in the event that ten children come or less than ten, these shall make up the school money nevertheless to ten.²

This is the first reference to school keeping by a woman found so far in our study among the American Dutch.³ The bearing of these figures on the question of the customary attendance at the Flatbush school is quite interesting. Apparently we are to judge that during the major portion of the year above 16 might be expected, while in the summer the attendance might fall even below 10, and probably would not go above 20. The division of the year into these two parts seems to anticipate the present American custom, though not till long afterwards did our summer vacation become established.

Jan Tibout proved no more acceptable than had Van Marken. Before the first half year was quite passed (June 16) a meeting of the consistory was called "to ascertain the truth in regard to the rumors which have been spread abroad for some time past concerning the deportment of our schoolmaster, Mr. Jan Thibaud." The women "concerning whom the said schoolmaster is said to have behaved himself unseemly" were invited to testify.⁴ They severally accused him of "very scandalous and entirely indecent deeds, viz, that Jan Thibaud had approached them with dishonorable words and acts and that they in self defense had pursued him with blows." He, in his turn, attempted a denial, but his admissions and explanations only served to fasten his guilt upon him. The authorities were disposed to treat him with consideration, and gave him "one month to investigate his case and search his heart to find out the truth, and to give God the praise." In the meantime, by unanimous vote of court and consistory, he was "suspended from service in the church and deprived of the participation in our Lord's holy supper." Whether this carried with it suspension from the school service is not clear; but at the expiration of the month (July 30), nothing more being brought forward in his behalf, "it was decided to remove him

¹ Flatbush consistory minutes, p. 41. The actual handwriting is Van Zuuren's; the italics again the writer's.

² *Ibid.*, p. 40.

³ A similar reference at the New Lots of slightly earlier date will be presented on p. 187.

⁴ Flatbush consistory minutes, pp. 53ff.

at once from his school and church service, and he was enjoined to prepare himself at once to put his affairs in order and to leave his house at an early date."¹ There can be no question that Tibout deserved to be dismissed. By his own confession he was grossly obscene in addressing the women, and was besides too intoxicated at times to know what he was doing or saying. By the explicit testimony of several women he had made most improper advances upon their persons, and according to one he had been in her presence inexpressibly indecent.²

Tibout's successor was Johannes van Ekelen, of Albany, the term of service beginning October 1, 1682. It is his contract that has been so widely published.³ By this time the schoolmaster was no longer court messenger, but instead was usually town clerk. This, however, was not a matter of the school contract. Van Ekelen was to be voorlezer, voorsanger, and sexton. The provision for dividing the school year into two parts, which we saw in the case of Tibout, was repeated. It was stipulated that when the minister preached elsewhere than at Flatbush the master must "read twice before the congregation, from the book commonly used for the purpose." "The children as usual shall recite their questions and answers out of the catechism on Sunday" "before afternoon service." Tuition fees were exacted "from those who attended the day school for a speller or reader, three guilders a quarter, and for a writer, four guilders. From those who attended evening school, for a speller or reader, four guilders, and for a writer, six guilders shall be given." For baptisms and funerals the charges were the same as in the case of Joosten. "In addition to the above, his salary shall consist of four hundred guilders, in grain, valued in seawant, to be delivered at Brooklyn Ferry * * * with the dwelling house, barn, pasture lot, and meadows to the school appertaining."⁴ This is substantially the same salary as Van Marken and Tibout received.

The relationship between court and consistory is the same as was observed in the case of Tibout. The contract which was written by Van Zuuren was "agreed upon in the consistory in the presence of the honorable constable and overseers." The preamble states that the master was "called and accepted with the advice and consent of the honorable magistrates." It is evident that Van Zuuren was trying to minimize the part played by the court, while the members of this, on their part, were not willing to give up active participation in the control.

¹ Flatbush consistory minutes, pp. 53 ff.

² See p. 164, where the consistory removed the ecclesiastical censure from Tibout.

³ The original is in the Flatbush consistory minutes, pp. 57-59. It was first published in translation by Strong (*op cit.*, p. 110 ff), and may be seen in Pratt (*op. cit.*, p. 65 ff) and in Dexter (*op cit.*, p. 581 ff).

⁴ The rate governing wampum at this time was about five to one. This 400 guilders wampum would then be about 80 guilders Hollands, or \$32 (Eccl. Rec., 702). It would be, in grain, 50 bushels of wheat, or 75 bushels of rye. Peas were valued at the same rate as rye.—Riker, *New Harlem*, p. 372, Flatbush town records, 106: 295.

Van Ekelen's contract was at first for only seven months, and accordingly was due to expire on May 1, 1683. Before that time "it was decided to renew the contract with the aforesaid Van Eckelen," but with certain expressed conditions. "In particular, that regarding the school service he should regulate himself according to the articles of his predecessor, Jan Thibaud, especially in accordance with the fourth article, which treats of the time of holding school." It is interesting that Van Ekelen at this time had no wife to whom he could entrust the summer school if the attendance should be less than 20.¹ Are we to infer that so small an attendance was improbable? The emoluments of the master, except the fixed salary, were increased. The burial fees were practically doubled, and the tuition fees for the day school were advanced to equal those of the night school: "For a reader or speller, 4 guilders per quarter, and for a writer, 6 guilders."²

Johannes van Ekelen, thus established as schoolmaster in 1682, continued for some years in the service. During the Leisler rebellion the Dutch on Long Island and elsewhere were much disturbed. "The furor of the common people," says D^r Varick, of the Flatbush Church, "ran very high, so that everybody who did not escape was taken by the throat, or on feigned pretexts thrown into prison. I was imprisoned and declared guilty of high treason."³ Schoolmaster Johannes van Ekelen was a leader in this uprising. When order was restored and D^r Varick released, he felt that Van Ekelen must be dismissed. In a complaint made to Gov. Ingoldsby D^r Varick says:

That in the late Rebellion Joannes Van Ecklen, the then clerk and schoolmaster of Flatbush hath always bin a very great zealot for the faction of Leisler, * * * especially the afore'sd Joanes Van Ekelen hath bin always opposing the minister and church council * * * publicly defaming the afore'sd minister, setting the common people against him, offering his service to drag him out of his house by violence to a pretended court. * * * Upon these considerations and others too long to rehearse, besides other complaints as to his service in the afors'd office, the church council did dismiss the afors'd Joanes Van Ekelen and did forbid him more to officiate, but choose in his place one Joannes Schenck a fitter person and well affected to the present government.

But "s^d Joanes Van Ekelen" did not mean to let the action of the minister and "church council" stop him from teaching. On the contrary, he "clandestinely without any of their knowledge procured a license" from the provincial governor; and "in defiance of their church and accustomed priviledges," he again set up school. Wherefore, continues the domine and his elder, "since it hath not bin accustomed to have two schoolmasters in that small town heretofore y^r petition'rs humbly pray y^r honor that s^d Joanes Van Ekelen may

¹ He was married on Sept. 3 following this contract.—Flatbush consistory minutes, p. 115.

² Flatbush consistory minutes, p. 61.

³ Letter to the classis, Apr. 9, 1693. Eccl. Rec., p. 1048 ff.

be forbid farther to teach school in Flatbush and that y^r honour would please to authorize Joanes Schenck to be the only schoolmaster there."¹

Whether it was the concluding prayer "for y^r hon^{'rs} health and happiness," or the loyalty of the petitioners, or the necessity of restoring order that availed with the governor, does not now appear; but on September 26, 1691, it was ordered that "s^d Schenck be admitted the only schoolmaster of Flatbush any former ord^r or warrant to any oy^r [other] person whatsoever notwithstanding."²

Van Ekelen's party, however, was not disposed to yield. Being in the numerical majority, they took the matter to the town meeting and had Auke Jans and Englebert Lott appointed a committee to look after the interests of the town in the matter. This committee, being specifically instructed to choose a schoolmaster, selected, of course, Johannes Van Ekelen. Thus the village had two masters, one chosen by the consistory and authorized by the governor; the other chosen by the town and accordingly representative of the majority of the people. Van Ekelen had retained the key of the schoolhouse, and this gave him an advantage. Justice Joseph Hegeman, who had from the first sided with D^eVarick against the Leislerians, issued a warrant to the constable directing him to get the key from Van Ekelen. When the constable went to deliver the warrant, others accompanied, including Jan Jansen van Ditmarse, a strong Van Ekelen partisan. Van Ekelen upon reading the warrant, "delivered the key upon the table, whereupon John Johnson van Ditmarse tooke up the key & askt if that was not the key of the school, and was answered yes, then he said he would keep it for the people;"³ which he did.

Justice Hegemen was not to be outdone in this fashion. "John Johnson van Ditmarse" was clearly guilty of "contempt of their Maj^{ties} authority," and was accordingly haled before the court of sessions (12 March 1692) to answer for his conduct. Upon being examined, he acknowledged that "he took away the key of y^e schoolhouse of Flatbush from the table and that he still had it and that he was advized to doe (so) by Ouchy Johnson (Auke Jans), & Englebert Lott and the people, and the said Ouchy and Englebert would Justify his doing of it being for the privilege of the people."³ When "the said Ouchy and Englebert" were examined, they told of their appointment by the people "to choose a schoolmaster," complained that "the minister and Justice did w^t (what) they pleased against the privileges of the town" and that "there was another school M^r. put upon them by the Command^r in Chief and Council." The court having heard them bound them over to answer to the next session

¹ N. Y. Col. MSS., xxxviii, 4 (quoted in Pratt, *op. cit.*, p. 72-3.)

² Council Minutes, vi, 55 (quoted in Pratt, *op. cit.*, p. 74.)

³ Minutes of the court of sessions. Kings County court and road records, 1, 5-6.

under a bond of £100. At the next session Van Ditmarse pleaded guilty and was fined. The case against the others was continued several times, but finally coming to trial, both men were found guilty (1693 May 9) and fined.¹

This contest is significant in the history of the Flatbush school. Although the minister and church were victorious in the immediate issue, the victory was dearly bought. The spirit of democracy which apparently had already set in before D^r Van Zuuren's time could not be permanently suppressed. Whatever else may be true of Leisler's "rebellion," on Long Island it was largely an uprising of the people against the more centralized management of public affairs which had previously prevailed. So far as can be judged from incomplete records, the participation of minister and consistory in the school decreased sensibly from this time until the Revolution. The town meeting, "the people," took over increasingly the direct management of all public affairs, pushing court and consistory alike aside.

The service of Johannes Schenck so elected is given exactly in the records. The Flatbush churchmasters' accounts contain records of annual salaries of 400 florins paid to Schenck for each of the years from 1691 to 1694 inclusive.² On April 2 of the last-named year he is paid besides "for a month's salary" 36 florins 6 stivers.³ Following this, Schenck's name appears no more for six years. We conclude accordingly that his first term ends about the 2d of April, 1694.⁴

Whether Schenck gave up his position voluntarily or whether the Van Ekelen party had by this time returned to power can not now be said; but the succeeding schoolmaster was none other than Johannes van Ekelen himself. The churchmasters' records show that he was paid annually 400 guilders for church service from August 1, 1694, to December 27, 1699.⁵ The size of the salary taken in connection with all the circumstances is sufficient to show that the "church service" is the customary combination of voorlezer-voorsanger-schoolmaster duties we have all the while found in the Dutch villages. The deacons' accounts contain the following item under date of December, 1699: "For a shroud, Johannes V. Ekelen, 6 gl."⁶ Similarly the churchmasters' account gives, under December 27, 1699, the following: "Paid to Tryntie Van Ekelen for nine

¹ Minutes of the court of sessions. Kings County court and roads records, pp. 8, 15, 17.

² *Op. cit.*, pp. 121, 129, 134.

³ *Ibid.*, p. 134.

⁴ It is stated (P. L. Schenck, *Memoirs of Johannes Schenck*, p. 3) that Schenck taught in New York City during the period 1698-1700. At any rate, he was in 1698 granted the rights of a freeman in New York City with privilege of keeping school (*N. Y. Hist. Soc. Coll.*, 1885: 71), and he had a son baptized in the church there on Jan. 31, 1697, and on March 20, 1698, he was witness to a baptism there (*N. Y. Gen. and Bio. Soc. Coll.*, ii, 242, 250).

⁵ *Loc. cit.*, pp. 137, 147, 149, 150. The first of these references is a little doubtful.

⁶ *Loc. cit.*, i, 107^A.

months' salary, 300 guilders."¹ Evidently, Van Ekelen had died during the last year of service. The salary payments for 1695, 1696, and 1697 had each read "for a year's salary ending August 1st." That for 1698 had simply been silent as to when the year ended. Each of these payments was for 400 guilders. Nine months, counting from August 1, 1698, would bring us to May 1, as the time of his death. Whether to accept this reckoning or to accept the repeated Decembers of the two quotations as the proper date we seem now to have no way of deciding.

When Van Ekelen died, Mr. Johannes Schenck was recalled. The first payment in the records is of date April 18, 1700. His salary was 436 guilders a year.² How this odd-looking amount came to be fixed does not appear. Payments of salary are made to Schenck at intervals until May 3, 1711,³ after which his name no more appears in the records. The following town meeting minute belongs apparently here:

The people of Midwoud assembled together by a warrant from Justice Polhemus upon a petition of the consistory to choose two men to call a school master—

Vote for the two men to call a schoolmaster:

Jan Cornelise.....	111111111111 [13]
Rych Hendrickse.....	11111 [6]
Cornelis Cornel.....	111111111 [10]
Jacob Hendrickse.....	111
Philippus Nagel.....	1111111 [8]
Johannes Symons.....	1
Mr. Peter Stirker.....	1111 [4]
Daniel Remse.....	1
Jan Cornelis.....	} being chosen. ⁴
Cornelis Cornell.....	

It is interesting to note the different parties engaged in securing a new master. The consistory, alert to the needs of the school, petitioned for a town meeting; the justice of the peace approved; the town in public meeting selected a committee, and this in turn called the schoolmaster. The struggle of the people over Van Ekelen seems to have fixed the authority of choosing a master within the town meeting.

Who was chosen schoolmaster to succeed Schenck does not appear. Strong says it was Jan Gancel.⁵ But the first reference to Gancel in any of the records is of date March 28, 1715, leaving thus a break of about four years. It may be questioned if any one was effectively called. Three suggestions, however, may be made for filling this gap, Jan Suydam, Isaac Selover, and Daniel Martineau. The first of these got an annual salary of 90 guilders for "church service" paid by

¹ *Loc. cit.*, p. 150.

² *Ibid.*, pp. 154, 158, 160.

³ *Ibid.*, p. 168.

⁴ Flatbush town records, 106: 104. This minute may possibly be of a later date.

⁵ *Op. cit.*, p. 109.

the churchmasters for a period extending from July 23, 1711, to March 28, 1715.¹ Except for the small salary one would naturally say that he filled the interim between Schenck and Gancel. Isaac Selover, however, received from the deacons as voorlezer an annual salary of (apparently) 120 guilders for the same four years.² Again, if the salary were larger and if one knew nothing of the other payments to Jan Suydam, one would not hesitate to say that Isaac Selover filled the interim in question. That he had previously taught at Flatlands (see page 208) would help one to accept this. As for Martineau, no one paid him a salary, so far as is known; but the following court minute seems to show that he actually taught in Flatbush in 1711:

Court of sessions held at flatbush, 8 May, 1711. M^r Daniel Martineau has requested of the Court that he may have the liberty of keeping school in the county hall in the outermost room for the Education & Instruction of Children; granted; with this proviso that any time the Justices sheriff or supervisors have the privilege of s^d county house upon any publique business.³

That Martineau had already taught for a number of years at the New Lotts (see page 189), that he arranged thus to teach in Flatbush in 1711, and that he was in Flatbush continuously until 1715⁴ would make it easy to suppose that he filled the interim under discussion.

The explanation of the two voorlezers is evidently found in the fact that during these years the church was rent in twain, one party including the old consistory, favored D^e Antonides for minister; the other, which had the town meeting on its side (and consequently the churchmasters) favored D^e Freeman.⁵ The deacons and churchmasters with their respective funds were, accordingly, on opposite sides of the controversy; and each party chose its own voorlezer. Whether either or neither or both taught school can not be decided with the information at hand. From the fact that neither Suydam nor Selover is given the title of "M^r:" in the records, it may well be questioned whether either had a school. If this be so, it is the easier to understand that Martineau should set up as a private master in the courthouse, and depend solely on tuition fees for his salary.

The breach was healed at the close of 1714.⁶ Selover then withdrew, and Suydam was accordingly made voorlezer of the united church at a salary of 160 guilders, which position he held for the next four years.⁷

¹ Flatbush churchmasters' accounts, pp. 169, 171, 172, 173. The first reference says "for a year's service" in Midwoud. The last says "for nine months' church service" as if the term ended on Mar. 28.

² Flatbush deacons' accounts, II, 2B, 3B, 4B, 5B.

³ Kings County court and road records, I, 165.

⁴ Flatbush churchmasters' accounts, pp. 166-176, *passim*.

⁵ Eccl. Rec., pp. 1938 ff., 1973 ff.

⁶ Eccl. Rec., p. 2063 ff. Flatbush town records, 106: 108, 103.

⁷ Flatbush churchmasters' accounts, p. 176; deacons' accounts, II, 9B, 10B.

This factional fight within the church had the effect of causing the village to change the schoolmaster's salary and the manner of paying it. In the beginning the deacons had paid a portion of the master's salary out of the weekly church collection account, although this was primarily for the poor. The remainder came from the regular funds of the village municipal authorities. When the school and church lands came to bring in sufficient income, this second part of the schoolmaster's salary was paid from the rents through the churchmasters; but the deacons continued to pay 50 guilders annually from their funds. This continued until 1678; after which the churchmasters paid the whole amount. The contracts specified the several duties of the person paid as schoolmaster, as sexton, as voorlezer, as voorsanger, as errand man for the consistory, and as grave-digger,¹ but the salary (i. e., exclusive of the fees incident) was not apportioned out among these several duties. Indeed, it is very improbable that anyone concerned could have distinguished exactly where one set of duties ended and another began. The payment of one salary for all the combined duties continued until this factional disturbance arose and showed the people by actual experience what "church service" was when separated from the "school service." The customs of their English neighbors doubtless had its effect too. It accordingly appears that from 1715 to the end of the period the deacons paid to the voorlezer and voorsanger for "church services" a fixed salary of 160 guilders, or (after 1725) its equivalent, £4 currency, equal to about 10 or 12 dollars. The churchmasters likewise in 1715 began a rule which they also maintained to the end of the period of simply furnishing the schoolmaster with the schoolhouse (which was also his dwelling), the school lot of some 8 acres,² some wood land, and a meadow. Originally a pasture had gone along with the other school lands, but when, after the reconciliation, the ministers of both factions were retained, this pasture land (so we may believe) was taken from the schoolmaster and given to one of the ministers. And the churchmasters by way of recompense paid the schoolmaster annually the sum of 120 guilders, or (after 1725) £3 for pasturage, the amount being unchanged until 1762 (apparently) when it was raised to £4. In 1771, it was further raised to £4 and 8 shillings.³

The schoolmaster might be appointed voorlezer and voorsanger and so receive the 160 guilders "church service," or he might not, according to conditions easily surmised, but not stated to us in the records. From 1715 to 1719 the schoolmaster did not receive the salary from the deacons. From 1719 to 1755 and possibly to 1758, he acted as voorlezer, etc., and accordingly received this salary. From 1758 to

¹ Cf. Jan Tibout's contract of 1681.

² Doc. Hist. of N. Y., iii, 113.

³ Flatbush churchmasters' accounts, pp. 174, 189, 202, 206, 230, 239, 258, 280, 286, 306, 309, 312.

1773 one other than the schoolmaster was voorlezer; after which time the positions were again united in the same man.¹

Jan Gancel is the first schoolmaster after the factional division within the town of 1711-1715. Strong, indeed, assigns Gancel to this period as well, saying that his term extended from 1711 to 1715;² but no evidence whatever has appeared to support the contention so far as the period of 1711-1715 is concerned. The first reference found in the records is dated March 28, 1715, when the churchmasters paid "60 guilders for pasturage for Mr. Genseling's cattle."³ A similar payment on January 18, 1716, of "60 guilders for half of the pasturage of Mr. Genseling's cattle,"⁴ fixes the annual payment made for this purpose at the figures stated in the discussion made above, and probably fixes the beginning of Gancel's term of service as close to January 18, 1715. The use of the title "Mr." and the 120 guilders a year for pasturage make it practically certain that Jan Gancel was in fact schoolmaster for a term beginning in 1715. The end of Gancel's service is pretty well fixed by the fact that on April 1, 1718, a town meeting met to choose two men "to call a schoolmaster and to make terms with him to the best advantage of the town according to their best judgment."⁵ It seems, however, to have been the latter part of the year before the transfer was actually made; for the churchmasters show on November 5th that they paid 5 guilders and 5 stivers "to Mr. Gancel for the writing of the contract of the schoolmaster."⁶ It is probably no accident that the consistory is not mentioned even in the calling of the town meeting to select the committee for securing a schoolmaster. The separation of function seems now complete between the consistory and the town authorities in the control of the school. Everything points to more direct management of affairs by the people themselves in town meeting, a marked change truly from the New Netherland days.

Adriaen Hegeman, second of the name in Flatbush, was Gancel's successor. His precise contract is not known. That he served under the same conditions as Gancel is wholly probable. The first salary payment to him noted in the records was on April 27, 1719, when there was "paid to Adriaen the schoolmaster for pasturage for his cattle 120 guilders." The next item gives the rest of his name and indicates an auxiliary occupation: "also paid to A. Hegeman for writing in the town meeting 15 : 0 : 0."⁷ The deacons also contracted with Hegeman for the "church service," paying him 160

¹ These statements will be justified in the subsequent detailed study of the several masters.

² Flatbush churchmasters' accounts, p. 109.

³ *Op. cit.*, p. 173.

⁴ *Ibid.*, p. 174. The wrong spelling of the name is but an instance of what one finds all through the records.

⁵ Flatbush town records, 106: 136.

⁶ *Op. cit.*, p. 187.

⁷ Flatbush churchmaster's records, p. 189. This 15 guilders would be about \$1.20 of our money.

guilders annually.¹ Occasionally, the payment is made to the voorlezer,² showing his title in church circles. During Hegeman's long career, in about 1725, the use of the Dutch money, guilders and stivers, finally gave way in the records to the English pounds, shillings, and pence. The ratio at the last was 40 guilders to the pound.³ The pound here used was the New York colonial currency, worth at that time about \$3 of present American currency.⁴ The ratio of "seawant" to "solid" money had been about the same since 1679, when Dr. Van Zuuren fought so vigorously over the relation of the ratio to his salary.⁵

Hegeman remained probably until 1741, some 23 years in all, much the longest continuous term of service found at Flatbush.⁶ His successor was Jores Remsen, who served also as voorlezer and town clerk.⁷ His contract seems to have been the same as Hegeman's. There was from the churchmasters the same £3 (the equivalent of the original 120 guilders) "for the field,"⁸ which began with Jan Gancel; and from the deacons the same £4 for "church service."⁹

Whether Remsen did not give entire satisfaction, or whether it was merely that the contract needed renewal or changing, does not certainly appear from the following town meeting minute of 1750:

We, the people of Midwoud, have assembled together by a warrant from a justice, Jan Verkerek, esq.; and we, the people, have deemed it good that these two men, namely, Abraham Lot and Phillipus Nagel, should make an agreement with Jores Remsen how he shall keep school, or with some one else.¹⁰

Since we find references as late as April 20, 1755, of the £3 "paid Jores Remsen for the field,"¹¹ it seems clear that Lot and Nagel made a satisfactory agreement with him. In 1755 there was a "vote for two men to engage a schoolmaster in accordance with the old custom."¹² As Remsen, who had previously been town clerk, was no longer serving, and as his name appears no more in the salary accounts, it is quite probable that he now finally gave up the school. It is possible that he did this on account of failing health; for we find his will made in 1758 and probated in 1759.¹³

¹ Flatbush deacons' accounts, ii, 13^B ff.

² *Ibid.*, pp. 23^B, 26^B.

³ Flatbush churchmasters' records, p. 204.

⁴ Eccl. Rec., p. 2590.

⁵ *Ibid.*, p. 711 ff.

⁶ Strong (*op. cit.*, p. 110) gives this date as the time when Hegeman left. The last noted specific reference to his service was on Apr. 13, 1740 (Flatbush churchmasters' records, p. 235). The first specific mention of his successor was two years later (Apr. 23, 1742, *ibid.*, p. 239). Abundant references testify to the continuity of Hegeman's service.

⁷ *Ibid.*, pp. 241, 264; Flatbush deacons' accounts, ii, 44^B, 56^B, 61^B.

⁸ Flatbush churchmasters' record, 276, 279, 280, 282, etc.

⁹ *Loc. cit.*, ii, 44^B, *et passim*.

¹⁰ Flatbush town records, 106: 204.

¹¹ Flatbush churchmasters' accounts, pp. 276, 282.

¹² Flatbush town records, 106: 216.

¹³ "It is my will that after my decease my two children, John and Elizabeth Remsen, shall be taught at school to larn to read, write and syfer at the charge of my whole estate." N. Y. Hist. Soc. Pub., 1896: 320 f.

Who was chosen to succeed Remsen can not now be stated. It may have been David Sprong, who was a candidate to succeed Jores Remsen as town clerk,¹ and who was voorlezer from about 1759 to 1773.² There was a schoolmaster, as the churchmaster's accounts show the regular annual payment "to the schoolmaster for the field 3 pounds."³

On April 17, 1758, the following newspaper advertisement appeared:

WANTED.

A Person qualified to teach Dutch and English, both Reading and Writing: Any such Person inclining to keep School may meet with good Encouragement by applying to Philipus Nagel, and Englebert Lott at Flatbush.

And also such another Person wanted for the New Lots in the Township of Flatbush; but, if this last be well qualified to teach Reading and Writing English only, he may have good Encouragement by applying to John Vanderveer, and Johannes Lott, living in the aforesaid Precinct of Flatbush.⁴

Probably this marks the introduction of English into the Flatbush school, hitherto exclusively Dutch. To carry both languages side by side was certainly a wise course during the transition period. That such a course was adopted is to be explained by the fact that the town and not the church controlled the school. It took the church nearly 40 years longer to reach a similar conclusion in regard to its own services.

Again we are in doubt as to who was chosen schoolmaster. The churchmasters do not appear to have made any payments "for the field" between 1758 and 1762. The deacon's accounts are, if possible, more puzzling. No payments appear for 1758 and 1759, but on May 26, 1760, they paid "Jan Lefferts 'for church service, £7 17s,'"⁵ and a month later "David Sprong for church service to April, 1760, the sum of £6."⁶ Since the annual salary for "church service" was £4, it may merely be that Lefferts was late in receiving his salary. The town records show that Jeremyas Vanderbilt was town clerk from 1755 to 1761, in which year Petrus Van Steenbergh was chosen.⁷

It may be accordingly that Van Steenbergh was chosen in answer to this 1758 advertisement, although the first certain reference to his service is of later date. He is referred to as the schoolmaster of Flatbush, either by himself or by others, at intervals from 1765 to 1773.⁷ He was, however, never the voorlezer.

So far at Flatbush there has appeared no reference to free schooling, even of the poor. We saw in Chapter II that the Holland custom

¹ Flatbush town records, 106: 214.

² Flatbush deacons' accounts, II, 64 ff.

³ *Loc. cit.*, pp. 284, ff.

⁴ N. Y. Gazette or Weekly Post-Boy.

⁵ *Loc. cit.*, II, 64^B.

⁶ *Loc. cit.*, 106: 214 ff., 226, 227.

⁷ N. Y. Hist. Soc. Pub., 1898: 350, 398; *ibid.*, 1899: 260; Flatbush town records, 107: 61; Eccl. Rec., p. 4261; Flatbush church master's records, p. 301 (Steenbergh was town clerk at this time), 309, 310, 311.

required the poor to be taught for nothing by the parochial schoolmaster, and if the number were excessive the deacons should bear the expense.¹ The same thing appeared in Evert Pietersen's contract at New Amsterdam in 1661, where it was required that "the poor and needy, who ask to be taught for God's sake, he shall teach for nothing." Possibly, the Flatbush masters taught "the poor and needy * * * for nothing," and let not the left hand know what the right did, that is, left us no record of it. Certainly, the number of the poor was small. But quite likely after 1711, when the salary was in great measure withdrawn, and tuition fees accordingly loomed bigger before the schoolmaster's eyes, that worthy was not so much inclined to leave the door open for any who might claim exemption. Be that as it may, it is 1773 before any explicit record appears on the subject. The deacons' accounts, from first to last, are full of references of alms freely bestowed, and most are recorded in such general terms that payment of the tuition of the poor might be included; but the following school bill tendered by Van Steenbergh is the first case noted:

The deacons of Flatbush Church for John Hegeman D^r
To P: V: Steenbergh

		s.
1772 December 5	To 2½ Quarters schooling for Catharine a 4/0.....	10,, 0
1773 March 11	To 4 Ditto for Rem a 4/0.....	16,, 0
		£1,, 6,, 0

Received the above Contents ~~of~~ me

P: V: Steenbergh.²

The deacons' accounts duly recorded on May 10, 1773, "paid for a poor man for schooling £1 6s. 0d."³ Following this case many instances of the same thing are noted in the records, the custom lasting apparently until the establishment of free schools in the nineteenth century.

During Van Steenbergh's term of service are found evidences of the extension of popular government in the school legislation passed by the town meeting. Thus, in 1767, "it was determined by the people of Midwoud (in town meeting assembled) that there should be brought for the school for each three quarters of year for each child one load of wood and in like proportion for a longer or shorter time."⁴ More to the point, however, are the instructions given to the committee appointed in 1773 to secure a successor to Van Steenbergh. The town meeting was not willing to allow the committee "to call a schoolmaster and to make terms with him to the best advantage of the town

¹ See page 27.

² Flatbush deacons' accounts, II, 87. This bill, attached to the page as given, is the original, written by Van Steenbergh himself. It is so neatly done

that any reader will feel himself drawn insensibly to the old master now so long gone.

³ *Loc. cit.*, II, 87^B.

⁴ Flatbush town records, 107: 47.

according to their best judgment," as had been done in 1718. On the contrary, the town gave the committee most minute directions "to call the present schoolmaster of Bedford and to make him the following offer, viz., 5, 6, and 7 shillings per quarter. That is to say, 5 shillings for each Dutch pupil, 6 shillings for each English pupil, and 7 shillings for each pupil who is instructed in arithmetic or the science of numbers. The church service as voorsanger, for which service he is to have £4 per year. The burial of the dead, for which he is to have as is at present customary. Likewise the rent of the Domine's field, being £4-8-0, and the possession and use of house, meadow and woodland. And if they should not succeed with the above-named schoolmaster, then the said Trustees (i. e., committee) shall advertise in the newspaper."¹

Evidently the master of Bedford could not be obtained, for the New York Gazette and Weekly Mercury of July 26, 1773, contains an advertisement for a schoolmaster at Flatbush "who is capable of teaching the Dutch and English languages." Van Steenbergh, whose departure was thus anticipated, taught until August 5, 1773,² when he left to take charge of the school of the New York Reformed Dutch Church.³ His successor was Anthony Welp, son of Johan Nicholas Welp, who, as we saw, was called from Holland to the New York school in 1755.

The contract with Anthony Welp is the only one of the eighteenth century that has come down to us from Flatbush. It is in many respects similar to the 1681-82 contract of Jan Tibout, though there are differences. The school hours and the devotional exercises are identical. To the reading and writing of the former curriculum is now added "also arithmetic so far as is possible for him, in case such is desired of him." As to terms, "the said schoolmaster shall receive for the instruction of each child or person in the Low Dutch spelling, reading, and writing the sum of four shillings, and for teaching English spelling, reading, and writing the sum of five shillings; and for teaching arithmetic the sum of six shillings; these amounts for every three months' instruction." The Heidelberg catechism is to be taught to the pupils or not "as those placed over them shall desire." The salary seems to have been considerably reduced from what it was in

¹ Flatbush town records, 107: 59.

² The following school bill, taken from Vanderbilt's *Social History of Flatbush* (p. 51), fixes the date:
Evert Hegeman, Dr.

To P. V. Steenbergh

1773 August 5th

To schooling from the 15th March to this day.....	9s 9d
For half a load of wood.....	2 6

£0 11 11

Received the full contents:

P. V. Steenbergh.

³ Eccl. Rec., p. 4265.

1682. In addition to "the schoolhouse, with the land, woodland, and meadow thereunto belonging," he should receive "four pounds and eight shillings for the rent of the school field." "The said schoolmaster shall also be paid yearly by the worthy consistory the sum of four pounds for taking charge of the church service as voorlezer and voorsanger." "For the burial of the dead * * * as much as is customary in the said town." In place then of the 400 guilders, wampum (worth \$32), which Jan Tibout had been promised in 1681, Welp was now promised 8 pounds and 8 shillings, New York currency (\$21). On the other hand the later tuition rates are somewhat higher than the earlier. An enrollment of 36 pupils would, together with the salary, have brought in almost identically the same annual income, namely, about \$75. The consistory was not a party to this agreement. It would seem, however, that the committee had the consistory's approval in some form, else the contract could not so certainly say, "The said schoolmaster shall also be paid yearly by the worthy consistory the sum of four pounds, etc." On the whole, immediate direct control by the people even in detail is everywhere evident. The church as well as the school committee appear to be instructed by the town meeting.

Anthony Welp, thus elected, remained in charge until the beginning of the Revolution, thus finishing the list of Flatbush masters so far as this account is concerned. There is no reason to doubt that the school had been kept continuously from 1659.

So far reference has been had only to the village of Midwoud proper. Within the township was a subordinate village called Oostwoud, or the New Lotts, which was laid out in 1677. Separate population returns are not given; but Dr. Van Zuuren's church membership list of 1680¹ shows that then about one-fifth of all were living in the new settlement. The rate list of 1683 shows 48 heads of families in the whole town.² There would be then in the New Lotts some 10 families. But true to the Dutch tradition they must have a school. Indeed, in the very patent itself of 1677 one lot of land was given to Rem Remsen, "schoolmaster of the town for the time being."³ Probably, however, this was hardly more than a legal device to set aside a lot permanently for school purposes.

The first definite move for a school was in 1680. In a meeting of the consistory it was decided that since the people of Oostwoud had increased both in families and children, it was "necessary that such means be adopted there for their instruction and education as are elsewhere made use of." The consistory therefore "at the request of

¹ Flatbush consistory minutes, p. 165 ff.

² Doc. hist. of N. Y., II, 293-4.

³ This patent is in the Kings County Hall of Records Division of Old Towns Records.

the people of that place, decided that there shall be chosen there a regular public schoolmaster" "and accordingly on December 14, 1680, *in the presence of* the Magistrates, there was chosen therefor the person of Dirk Storm."¹

The contract made then is similar in many respects to Jan Tibout's of the succeeding year. The school year was similarly divided into two parts. From November to May, Storm himself must be present in person to give instruction; and similarly during the rest of the year "if ten or more children come, or if those who do come shall make up the tuition fees of ten." But if from May to November "six or more children come" his wife was to give the instruction. The hours were the same as Tibout's; "and at each session before the beginning of the same, the sign shall be given with the horn or drum." The compensation was to consist of "one hundred and forty gulden in grain at market price, yearly." "The people shall also furnish the schoolmaster with a suitable dwelling-house with a well, and convenient for holding school therein." The school fees were the same as Tibout's and there was the same provision for evening school. The frontier character of the place is well shown in the 13th article: "above all this the people of Oostwoud promise in particular that they will each year clear one morgen [two acres] of land * * * and root out the stumps and plough the ground * * *." The term of service was to begin January 5, 1681, and last for three years. The contract was signed on the left side by the consistory, on the right by the magistrates, below by the deputies of Oostwout, and "on the other side by the schoolmaster."²

The proper relationships between the two parts of the township in the payment of the school expenses came to be a subject of dispute. On the 4th of March succeeding the signing of this contract, the constable of the town brought suit against certain representatives of Oostwoud charging "that the people of Oostwoud are unwilling to pay town charges." The defendants answered "that certain of the magistrates in conjunction with the church consistory have made a contract for a schoolmaster and the building of a schoolhouse and that they are willing to contribute therefor, in case the old town also helped to bear their burdens." In rendering the decision the justices of the peace asserted that "the contract was proper to be carried out and that all common expenses which are authorized and approved by a majority vote must also be paid by the people in common, each according to his circumstances."³

¹ Flatbush consistory minutes, p. 49. The italics in the last sentence are used to call attention to De Van Zuuren's wish and theory as to the part played by the magistrates in making the contract.

² *Ibid.*, p. 49 ff.

³ Flatbush town records, 107: 18.

This is a clear case of town charges for school purposes, for building the schoolhouse, and also apparently for the salary, as no reference to paying Storm's salary is found in either the deacon's accounts or the church master's accounts. The question of paying the charges, however, was not yet settled. The following November (24) it was "voted by the inhabitants of Midwoud and Oostwoud and approved by the constable and overseers that the old town of Middewoud shall be held to pay its portion of the town's expenses and the salary of the minister; likewise Oostwoud: the latter promises to build a parsonage and school house and keep same in repairs; and to pay the teacher's salary (one hundred and forty guilders a year)."¹

When Storm's contract expired it was renewed on much the same terms. Only he was not to demand "any salary in particular * * * Nevertheless, all who have plow and draught animals at Oostwoud, shall be bound to plow one day for him * * * or harrow or draw loads or work in some other way with horses and draught beasts." The contract was to continue at the pleasure of the parties, either to give the other a quarter's notice before a change.²

Either Storm never received the salary on his original contract or he was disposed to claim a salary in spite of the renewal contract, for the minutes of the court of sessions (1685) recite that—

an agreement [was] read between Derick [Dirk] Storm and Joseph Hegeman, Cornelius Berrien, John Stryker, William Guiliamse, and others in behalf of y^e town of Flatbush, uppon which Storm prayed a sallary may be allowed him for serving the town as schoolmaster to their children. Court Stephens and Symon Jansen to examine y^e accounts and agreement between them, and these partys to stand to their determination.³

It is interesting to note that the case was brought against these men as agents acting "in behalf of y^e town of Flatbush," no mention being made of the church's connection. The same thing is apparent in the statement that Storm had been "serving the town as schoolmaster to their children." This may be taken as settling the question—if indeed it were a question—as to whether the school was a town or a church school. Legally, Storm was a public schoolmaster in the employ of the town. How the suit was decided by the commissioners does not appear.

This school at New Lotts was maintained continuously from its inception in 1680. While the information regarding it is not as full as is that respecting the school at Flatbush proper, there seems abundant justification for the assertion made. The list of schoolmasters can not be made out with any fullness. Storm probably taught through 1686. Jores Van Spyk, of whom nothing else is known, was in

¹ Flatbush town records, 104: 200-1.

² Flatbush consistory minutes, p. 52.

³ Strong, *op. cit.*, p. 37. Both contracts must have been read; since some of these names are on one and some on the other paper.

charge in 1687 and 1688, and possibly a part of 1689.¹ Following him was a man whose full name is not even known:

M^r Davit was Voorlezer and schoolmaster of Oostwoud for ten months service in the year 16 $\frac{1}{2}$ according to the statement of M^r Johannis Mortier's book and amounts to f 208-0.²

This is significant as showing not only this otherwise unknown service, but as indicating that the churchmasters were under obligation to this M^r David at the rate of 250 guilders a year. There was a schoolmaster the next year, though we do not know his name.³ Possibly it was Daniel Martineau, who was the incumbent from 1692 to 1700, at a salary for part of the time of 200 guilders annually and afterwards at 250 guilders.⁴

So far as appears, the immediate successor of Martineau was Jan Langestraat, who was paid a salary of 260 florins a year from 1701 to 1706, inclusive.⁵ After this our records are very scattered, being mostly confined to repairs made by the churchmasters. In 1712 the schoolhouse was rented out.⁶ This could easily mean that some resident householder was schoolmaster and taught in his own dwelling. Jan Suydam was apparently living in the house in "17 $\frac{1}{4}$," for we find in that year a payment made by the churchmasters "to Jan Suydam for two hinges for a door on the schoolhouse at New Lotts."⁷ As he was afterwards voorlezer and probably schoolmaster at Flatlands,⁸ and was at this time voorlezer at Flatbush,⁹ it may be that he was schoolmaster at the time that these and other repairs were made on the New Lotts schoolhouse.

But if Suydam was schoolmaster at the New Lotts he did not hold the position after 1719, for on September 22 of that year the following interesting item appears in the churchmasters' accounts: "Paid to the school dame at Oostwoud for a bottle of rum when the well was made, 3 guilders."¹⁰

To us the school dame is the most interesting feature of the scene; for, apart from the possible summer teaching of the wives of Tibout, Storm, and Van Ekelen, this is the first and only instance noted of a school dame among the American Dutch. Their wish to find a voorlezer and voorsanger in the schoolmaster undoubtedly had marked effect in making them prefer a master to a mistress. We know nothing more of this dame, not even her name. The bottle of rum evidently meant that the neighbors were called in to help with the well, and some "good cheer" was useful in helping the cause along.

Throughout the whole period the churchmasters were making repairs on this schoolhouse. In 1736 in particular they seem to have

¹ Flatbush deacons' accounts, i, 70^A, 75^B.

² Flatbush churchmasters' accounts, p. 122.

³ Flatbush deacons' accounts, i, 80^B.

⁴ Flatbush churchmasters' accounts, pp. 118, 125, 128, 138, 147, 149, 150.

⁵ *Ibid.*, pp. 154, 158, 162.

⁶ *Ibid.*, p. 169.

⁷ *Ibid.*, p. 185.

⁸ See p. 208.

⁹ *Loc. cit.*, p. 192.

refitted the schoolroom, planks for a table, glass for the windows, "an hourglass for the schoolmaster."¹ What a vivid reminder of the past is this hourglass, a past that seems entirely gone. It is worthy of note that it is "for the schoolmaster." The dame was not a permanent institution.

After Langestraat in 1706, neither deacons nor churchmasters of Flatbush seem to have concerned themselves with financial remuneration for either voorlezer or master for the New Lotts. Probably they felt that the schoolhouse and lot was sufficient pay. Quite possibly, if we had fuller information, some compensating consideration would appear. The public interest is shown in the action of a town meeting in 1740 when it was decided that the surplusage from the "interest of the bonds which the church masters have in their possession * * * shall be used for the repair of the church and school (that is, the Low Dutch schoolhouse in Midwoud) and the schoolhouse in the New Lands."² The next and last reference so far found has already been seen in the newspaper advertisement of 1758:

Also such another person wanted for the New Lotts; but if this last be well qualified to teach reading and writing English only, he may have good encouragement by applying to John Vandever and Johannes Lott living in the aforesaid precinct of Flatbush.³

It is interesting to note that while Flatbush proper was willing to have the English language alongside of the Dutch, the people of the New Lotts were willing to have English alone. It may be that these lived more in touch with their English neighbors; and it may be that one who had command of both languages was harder to find. The absence of arithmetic from the curriculum is worthy of note.

The evening school must, it seems, be taken as a regular institution at Flatbush and probably throughout the American Dutch. Jacob Joosten's contract of 1670 included in the schedule of school fees, "for evening school, reading, and writing, 3 gl."⁴ In 1678 Jan Emant, apprenticing his son to learn the smith's trade, stipulated that the boy should receive his board, clothing, and instruction in the eveningschool in winter.⁵ Dirk Storm's contract at the New Lotts in 1681, Tibout's contract at Flatbush in 1681, and Van Ekelen's at Flatbush in 1682, its renewal of 1683, all contrast in the schedule of tuition charges the rates for day school with those for evening school; Van Ekelen's of 1682, saying, "He shall receive from those who attend the day school, for a speller or reader, three guilders a quarter, and for a writer, four guilders. From those who attend evening school, for a speller or reader, four guilders, and for a writer, six guilders shall be given."⁶

In another Flatbush apprenticeship (1695), the master agreed to furnish "washing, sleeping, victuals, and drink * * * also (to)

¹ *Lec. cit.*, p. 229.

² Flatbush town records, 106: 113.

³ See p. 183.

⁴ See p. 168.

⁵ Flatbush town records, 101: 32.

⁶ Strong, *op. cit.*, p. 113.

endeavor to instruct said Jonathan in said art and trade of a smith * * * also that said Jonathan may have the liberty to go in night school in the winter."¹ It is worth noting that both apprentices were expected to attend night school in the winter.

In order to present a full discussion of the subject, other references to evening schools may be added. Evert Pietersen, at New Amsterdam in 1661, was specifically allowed to charge more tuition in the case of pupils coming at night. An evening school was kept at Kingston certainly in 1668, and apparently as a regular custom.² An apprenticeship arranged by the Flatlands deacons in 1765 provided that the master should "teach and Instruct or Cause to be taught or Instructed" the apprentice "to Read, write, and two Quarters night schooling of Syphering."³ When Petrus van Steenbergh took charge of the school of the Reformed Dutch Church in New York City in 1773 he was allowed to "keep an evening school."⁴ Taking all these references together, and considering that they are widely separated in time and place, and that nearly every one refers to the evening school as if it were an established custom, we seem authorized to consider that the Dutch of America from the first considered the evening school as a normal and proper feature of the village school.

The schoolhouse has been constantly referred to; and it has been all the while evident that it was built, owned, and repaired by the public; that one building served as a dwelling for the master and as a house for the school has not been so explicit. We may therefore bring together the references bearing on the subject. In 1670 Joosten was promised that he should have "the next summer a new and proper dwelling on the school lot."⁵ The contract for erecting this building the next year describes it as "the schoolhouse."⁶ Apparently, then, the two terms are used interchangeably. In Storm's contract at the New Lotts in 1681 it was stipulated that the people should furnish "the schoolmaster with a dwelling house * * * convenient for holding school therein."⁷ Bricks for an oven for the New Lotts schoolhouse in "17½" show that the schoolhouse was then a dwelling.⁸ The house at New Lotts might, of course, be of different style from that at Flatbush; but the custom is almost certainly shown. When Van Marken was dismissed, he was ordered to "surrender the schoolhouse."⁹ In a similar situation, Tibout was ordered "to put his affairs in order and to leave his house at an early date."¹⁰ Both orders evidently contemplated the same situation and the same response. So always there is reference to but one house; sometimes it is called the schoolhouse; sometimes it is the

¹ Vanderbilt, *op cit.*, p. 261.

² See p. 212.

³ Flatlands church records.

⁴ Eccl. Rec., p. 4261.

⁵ Flatbush town records, 105: 207.

⁶ Flatbush churchmasters' accounts, pp. 14, 19.

⁷ Flatbush consistory minutes, p. 50.

⁸ Flatbush churchmasters' accounts, p. 155.

⁹ Flatbush consistory minutes, p. 20.

¹⁰ *Ibid.*, p. 55.

dwelling house of the master. Both terms are evidently used interchangeably. Perhaps the most satisfactory single reference to show that at Flatbush there was only one house, which consequently was used both as a dwelling and as a school, is found in an itemized list of the school property included in a petition for a charter of the church in 1711. In this list the various lots of land are mentioned in all the detail which legal exactness could require, "allso one howse & Lott of ground in the said Town called the School howse containing Eight acres."¹ Here it may be taken as certain that there is no omission. There was "one house * * * called the schoolhouse."² Evidently, then, from a very early date and throughout the period there was at Flatbush a schoolhouse in which the master also lived. The lot wherein this stood contained in 1711 about 8 acres, and upon it, besides the dwelling house, stood a barn (at least part of the time), and there went along with this a suitable pasture lot (rented to the domine after 1715), woodland, and salt meadow. As to the dimensions of the schoolhouse, we have no knowledge.

As to the school furniture and supplies, there are few references. Tables are a number of times referred to; on one occasion (1694) three were bought at once.³ Probably these were used for the writing pupils. Benches, of course, were used, and a number of references to them are found.⁴ In 1736 an hourglass was bought for the schoolmaster at New Lotts.⁵ For calling the pupils into school a bell was used at Flatbush—possibly the church bell;⁶ at the New Lotts (1681) a "horn or drum."⁷ Apparently, the small schoolboy with stones to throw was as omnipresent then as at some later periods, for putting in glass for the school was one of the commonest expenses from 1670 to the close of the period.⁸ Of all matters pertaining to the schoolhouse, the most remarkable purchase or repair was in 1681, when the churchmasters paid 12 guilders "for toes and teeth made in the schoolhouse."⁹ One stands amazed!

A brief discussion of the management of public affairs may serve to show more exactly the place of the school in the general scheme of public administration. The Dutch had a village court of schout and schepens as the only body of local control, and in the selection of these officials the public had no voice. This body united with the

¹ Doc. Hist. of N. Y., III, 113.

² Further references bearing on the point are found in the Flatbush town records, 106: 113; *ibid.*, 107: 59, 61 (sec. 5).

³ Flatbush churchmasters' accounts, pp. 137, 181, 229, 238.

⁴ *Ibid.*, pp. 147, 148, 238.

⁵ *Ibid.*, p. 229.

⁶ Flatbush consistory minutes, p. 39.

⁷ *Ibid.*, p. 49.

⁸ Flatbush churchmasters' accounts, pp. 6, 125, 149, etc.

⁹ *Ibid.*, p. 66. The Dutch words are "teen en tander." Most probably it was a colloquial phrase in use among the carpenters.

consistory to control school affairs. When the Duke's laws were put into operation with the coming of the English, this court was continued with the officers called by their English names of constable and overseers, and elected by the people in town meeting assembled. For many years after the passing of the Dutch régime this village court continued to be the principal body of local control, looking after the school as had been done during the Dutch period. All the contracts up to and including Van Ekelen's in 1682 were signed conjointly by it and the consistory. With the Liesler insurrection a strong democratic movement set in which seems to have lessened materially the influence of the village court.

The town meeting, which from this time becomes more important in public affairs, was composed of all householders, including even women who were heads of families.¹ The meeting had to be summoned by "a warrant from a justice," and apparently the purpose of the meeting had to be stated in the call. We give a specimen of such a summons in the original English, which was then used in higher legal processes. It is interesting to note the schoolhouse as the place of gathering:

Kings }
County }^{ss}

To the Constable of Flatbush: *These.*

You are hereby in his Majesties name required and commanded to give warning to all the freeholders and inhabitants of the town of Flatbush aforesaid to appear at the schoolhouse at Flatbush aforesaid on Wednesday next ensuing the date thereof, at tenn of the clock in the morning of the same day to conclude with one another about the places and especially concerning the charges as the church masters has ben at for getting a new cover upon the church of Flatbush aforesaid, etc. Hereof you are not to fail.

Given under my hand and seal, this ninth day of February, in the sixth year of his Majesties Reign, A. D. 1734.

Rych Suydam.²

A town meeting so summoned took care of the general welfare; it could sell the public land,³ levy taxes,⁴ and make regulations regarding public fencing.⁵ It had considerable authority in what we should now call church matters. In 1701, for example, it selected "four men from the people in cooperation with four from the consistory to prepare such articles (concerning the church of Midwoud) as they shall find good for the benefit of the church and the people and that the same shall take effect without any objection on the part of any one."⁶ It had the legal right of electing the minister, and it exercised the right to a greater or less degree. The minister's salary, and the manner of raising it, were also decided by town meeting,⁷ as was

¹ Flatbush town records, 106: 35 ff.

² *Ibid.*, p. 178.

³ *Ibid.*, p. 167.

⁴ *Ibid.*, p. 208.

⁵ *Ibid.*, p. 35 ff.

⁶ *Ibid.*, p. 3.

⁷ *Ibid.*, pp. 26, 113.

the question of selling or renting the church lots.¹ After 1711 it elected the church masters and prescribed their duties. Thus in that year it required of the churchmasters that—

they shall with all vigilance and diligence give their attention to the lands over which they have jurisdiction to the end that the same may be leased in good order and form and the rent guaranteed; furthermore to have the same oversight over the schoolhouse and over the church, which is now in bad condition, that suitable repairs may be made therein, and whatever other property may belong to the people.²

The churchmasters so chosen were commanded at the close of the year to “render an accounting of receipts and expenditures to the entire body.”³

The most interesting function of the town meeting, so far as concerns our present inquiry, was their selection of a committee to choose a schoolmaster. In all, six instances appear where this was done, beginning in 1691 and extending to 1773.⁴

The churchmasters and consistory were important factors in the administration of public affairs. The former were, as we have seen, distinctly the servants of the town. To the quotation from the town meeting minutes given above may be added another excerpt to show how the church and school funds were public funds and subject to explicit direction from the town meeting. The town meeting in question (6 May, 1740) had been called “to decide with another regarding the calling of minister, how and what he shall be paid.”

We, the people of Midwoud above mentioned, have reached a complete agreement regarding the payment of our ministers * * * they shall be paid from the interest of the bonds which the churchmasters have in their possession; and also from the rent of the church lots; * * * and it is further agreed that the surplus money from the interest of aforesaid shall be used for the repair of the church and school (that is, the Low Dutch schoolhouse in Midwoud) and the schoolhouse in New Lands. And in case there shall still be a surplus remaining of the aforesaid money, the churchmasters shall have the power to use the same and to spend it for the best advantage of the town of Midwoud. And the church wardens shall be bound each and every year to render an accounting to the next chosen church wardens * * * or to the people or otherwise, as the people shall deem good.⁵

It is evident from the foregoing that the churchmasters got their name from the principal object of their care, and in no true sense are to be conceived of as servants of the church. In Flatbush,

¹ Flatbush town records, 106: 150.

² *Ibid.*, p. 81.

³ *Ibid.* Apparently before 1711 the village court had chosen the churchmasters. At any rate that was the custom in 1679. At that time De Van Zuuren was trying to enlarge the powers of the consistory. In response to his prodding, the consistory “decreed that the management and lands of the Low Dutch Church ought to be entrusted to the consistory of the same,” and accordingly requested “the right of choosing the churchmasters in conjunction with their Honors the Constable and Overseers.” The request was granted for the election at hand. The next succeeding churchmaster, however, “was chosen by the magistrates without the consistory.” For a short time this alternation seems to have prevailed. (Flatbush consistory minutes, pp. 17, 41.)

⁴ Flatbush town records, 106: 104, 136, 204, 216; *ibid.*, 107: 59; Kings County court and roads records, 1, 5-6.

⁵ Flatbush town records, 106: 113.

after 1711, they were virtually a standing committee of the people (town meeting), charged with the care of public property. As such they were elected by the people and had to report annually to the people.

The consistory, unlike the churchmasters, were the real servants of the church. The place of the consistory in the ecclesiastical organization had been fixed by the Synod of Dort (1618-19) beyond the reach of those democratic influences which in time changed so much of Dutch life in America.¹ In accordance with the enactment of the synod that the consistory "see to it that everywhere there were good schoolmasters,"² we find that during the Dutch period and for many years thereafter the consistory conjointly with the local civil authorities made contracts with schoolmasters. This was done uniformly, it appears, in the seventeenth century.³ Furthermore the consistory thus took part not only in the selection of the schoolmaster, but in discharging him from his office. In the cases of Van Marken (1680) and Tibout (1682), it did this in conjunction with the magistrates, but in the case of Van Ekelen, discharged in 1691, it is expressly declared that "the church council did dismiss the aforesaid Joanes Van Ekelen."⁴ This act of dismissing Van Ekelen (1691) seems to have marked the climax of power reached by the consistory. Probably too it hastened the decline of that same power. A very strong democratic spirit had by this time set in, in which the "common people"⁵ were arrayed against what had hitherto been a ruling clique. The people distinctly resented this action of the consistory in displacing Van Ekelen with Schenck. While the paucity of available records forbids a final generalization, it seems certain that the school passed more and more into the hands of the town meeting. The last explicit record found of participation by the consistory in school affairs is the case where a town meeting in 1711 to choose two men to secure a schoolmaster was called "upon the petition of the consistory." Apparently the consistory lost ground because it was too far removed from popular opinion to make its activity acceptable to the "common people." Doubtless, too, the unfortunate dissensions within the Dutch churches beginning about 1691 tended to weaken the force of the church authorities. During the first decade of the eighteenth century there were in several of these Long Island Dutch churches two rival consistories, each claiming to have the only legal existence.⁶

¹ Eccl. Rec., pp. 4220-1, 4338.

² *Ibid.*, p. 4220.

³ In this connection attention should be called to Van Zuuren's protest, in 1690, to his consistory that the civil authorities of right should have no part in the control of the school. (See p. 171.)

⁴ Pages 172, 173, 175.

⁵ To use DeVarick's phrase, Pratt, *op. cit.*, p. 72; Eccl. Rec., p. 1048 ff.

⁶ Eccl. Rec., pp. 1943, 1944, 2084.

Under such conditions, control of the school must inevitably fall into other hands.

One further reference to the public consideration of the schools must be presented, even though there is nothing available to throw light on an otherwise wholly unexpected phase of school supervision. In the minutes of the court of sessions of the "West Riding of Yorkshire"¹ held at Gravesend on December 21, 1676, is found the following item:

The church affairs as to ministers or readers & schools for children moved to be considered. Gravesend noted to be most remiss herein.²

One would certainly infer from this that the court of sessions felt duty bound to pass in review, possibly at stated intervals, the various villages within its jurisdiction to see whether they were maintaining a certain standard in their support of churches and schools. But such an inference, however much warranted in the wording of the minute quoted, is utterly at variance with everything that we have been accustomed to attribute to the English control of colony. It is much to be desired that subsequent study of this period may throw light upon this act of the court.

The records of Flatbush furnish excellent data for a study of the illiteracy of the Dutch in that village. Seven full lists of the inhabitants are available, the assessment rolls of the town for 1675, 1676, 1683, and 1706; the roll of those who took the oath of allegiance, 1687, and two census lists for 1698 and 1738.³ The first three assessment rolls give the names of the heads of families, the number of polls in each family (males above 16), the number of cattle of various kinds, and the number of morgens of land that each owned. As many are included who pay simply on their own polls, we seem warranted in supposing that these three rolls contain complete lists of the male adults. The 1706 assessment roll includes only landholders. The two census lists appear to be complete. The roll of those taking the oath of allegiance seems to include all male Dutch inhabitants above 16. For the specific purpose at hand all women (widows, heads of families) and all men of non-Dutch stock are excluded; the latter (English, etc.) are excluded because they probably did not attend the Dutch schools; the women are considered separately.

The standard of illiteracy taken was the inability to write one's name to formal papers, or—to state it positively—the making of one's mark in signing such papers. The procedure was to hunt

¹ Yorkshire was the name given by Gov. Nichols to the region composed of Long Island, Westchester, and Staten Island. The West Riding of this included Staten Island, Kings County, and the town of Newtown. Brodhead, *op. cit.*, II, 63.

² Kings County conveyances, I, 14.

³ Found respectively in the Doc. hist. of N. Y., IV, 97-9, II, 269-272; *ibid.*, II, 293-4; Kings County conveyances, I, p. 195; Doc. hist. of N. Y., I, 429; *ibid.*, III, 89; *ibid.*, IV, 122-4. The dates of the two last-named are not certainly those here assigned; but the variation can not be great.

through the available records for the names on the lists described above, and note whether or not the several individuals wrote their names or made their marks. Most of this information was got either from the original records or from certified copies. In some instances Bergen's statements¹ as to how the various persons signed their names have been taken. Bergen is far from being infallible; but it is believed that any error introduced in this way is so small as to be negligible. Unfortunately not every name could, in the time available, be found. After the illiteracy had been determined as far as possible by the foregoing plan, the next step was to ascertain whether or not each individual had passed the usual school period in Holland or in America. With the scanty data available, it is evident that only approximate accuracy was here possible. It was necessary in this search to use a variety of sources, conclusions being drawn in many instances from relatively slight preponderance of probability. Very likely the conclusions in not a few particular cases are incorrect, so that specific figures here found need not be accepted as final, but it is believed that the general tendencies are correctly shown.

The following table gives the results of both studies:

Illiteracy at Flatbush, 1675-1738.

	1675	1676	1683	1687	1698	1706	1738	Com- bined lists. ¹
1. Number of male Dutch on the several lists.....	52	² 47	45	69	57	42	61	274
2. Number of written signatures.....	29	30	31	52	48	36	52	205
3. Number of marks made.....	17	13	14	13	7	4	3	48
4. Number whose manner of signing was not found..	6	² 4	0	4	2	2	6	21
5. Per cent of marks to total known ways of signing..	37	30	31	20	13	10	5	19
6. Number of individuals probably trained in Holland.....	31	27	24	23	18	7	2	90
7. Number of these who made their marks.....	9	6	6	2	3	1	0	23
8. Number of individuals probably trained in America.....	9	10	15	41	30	28	53	130
9. Number of these who made their marks.....	6	5	5	11	4	2	3	17
10. Per cent of Holland trained who made marks.....	29	22	25	9	17	14	(³)	26
11. Per cent of American trained who made marks...	67	50	33	27	13	7	6	13

¹ Including some 68 other Flatbush inhabitants not found on the several lists.

² Including one undecipherable name.

³ Number too small to make the per cent significant.

The higher figures of 1687 are due to the fact that (apparently) all males above 16 took the oath of allegiance; whereas, on the other rolls, youths over 16 living with their parents were not separately returned. In the 1706 assessment list, only landholders were included. The last column contains some few names that do not appear on any of the preceding published lists. The significant results are contained in items 5, 10, and 11. The most interesting and gratifying result is seen in item 11, showing the gradual improvement of the American-bred population as time went on. This improvement was probably due to the fact that the first generation

¹ *Op. cit.*, *passim*.

of children to grow up after the principal immigration found little or no opportunity to attend school, whereas succeeding generations of children found well-established schools. Just why the Holland bred also should have made an increasingly better showing is not easy to explain. Possibly, the earlier immigrants were of a slightly lower grade of society than the later ones, so that the illiterates in 1675 were on the whole older and so died out earlier. The relatively better showing of the aggregate American bred (13 per cent) as compared with the aggregate Holland bred (26 per cent) is most striking. Evidently Flatbush presents an educational experience directly counter to that seen in some of the other American colonies where succeeding generations were less literate than the original stock.

The study of the illiteracy of the Flatbush women is not so gratifying, nor is the same detailed discussion possible. Not only were fewer names secured, but it did not prove feasible to distinguish these as Holland bred and American bred. Of the 56 names secured, 24 wrote their names and 32 made their marks, which gives an illiteracy for the women of 57 per cent. With numbers so small as these, the result is uncertain; but the names found probably represent not far from an "average sampling." Almost the same per cent was found from 33 names of Albany, although from the rest of the colony a larger per cent of illiteracy was obtained—about 66 per cent.¹ It, however, would not be correct to conclude that only 44 per cent of the women went to school. The tuition charges, as we have seen, distinguished between those who learned to read and those who learned also to write. Quite likely it was frequently counted sufficient to give the daughter "as much education as to enable her to read the Holy Scriptures."² Writing, except in business affairs, was but little needed.

The transition from the use of the Dutch language to English may properly receive some attention. With the coming into power of the English, the higher court proceedings were conducted in English, as were most of the communications with the provincial authorities. In many ways, commercial interests demanded a knowledge of English, and the evergrowing ratio of English to Dutch in the Province accelerated the movement. Nevertheless the Dutch were tenacious of their customs, especially where their religious interests were involved. The ministers in the Dutch churches during colonial days were almost exclusively natives of the mother country, who had been trained in the Dutch universities, and had come to New Netherland and colonial New York in the prime of life. With her ministers steeped thus in Holland tradition, with her formularies existing only

¹ See p. 229.

² Words taken from a Dutch will of Ulster County, 1770. N. Y. Hist. Soc. Pub., 1900: 238.

in the Dutch language,¹ with that strong conservatism which universally surrounds religious practice, the church became the center of opposition to the alien influence which was to supplant the old language and modify the old custom. The school, filling as it did the double function of preparing for the practical duties of life and of fitting for intelligent and appreciative participation in church service, found itself drawn in both directions. Its double system of control at Flatbush gave opportunity for the two tendencies to express themselves. Accordingly was found in 1758, the demand for a "person qualified to teach Dutch and English." It was at this very time that the reactionary D^r Ritzema of New York in a supreme effort to stem the oncoming tide was importing a schoolmaster from the old country. In Flatbush, however, where there were no private schools, one school must do all the teaching, and meet all the demands. Hence the presence of both languages in the curriculum of the school. The town meeting even followed much later in the use of English, its last record in Dutch being of date April 4, 1775,² the first in English a year later.

The church, as was to be expected, held longer to the Dutch. Dr. Strong states,³ and there appears no reason to question the statement, that services in English were not introduced until 1792, and even then were confined to the afternoon service.⁴ Not until 1805 was English the exclusive language of church service. For still many years Dutch was used in the privacy of many of the old families.⁵

We gather, then, from the foregoing discussion that the Dutch village of Flatbush kept in continuous operation an elementary school from at least as early a date as 1659, while its subordinate village of New Lotts maintained one from 1681. These schools were under the joint control of church and civil authority, with the people in town meeting gradually assuming more and more of direct control. It seems proper to call such an institution a public school, because its master was chosen and his work directed by the public, partly through the town meeting or its committee, partly through the village magistracy, partly through the church, which was in great measure a constituent member of the body politic. The school was public, furthermore, in that the master received his salary and the school-house was kept in repair by the income from lands set aside by the public for these and other purposes, which properties in turn were administered by public officials (churchmasters) elected by the people, and answerable to the people. It appears probable, too, that, if

¹ They existed also in Walloon French, but this would be no factor in the situation under discussion.

² Flatbush town records, 107: 65, 66.

³ *Op. cit.*, p. 94.

⁴ *Ibid.*, p. 102.

⁵ Mr. John H. Ditmas, at present living in Flatbush, has told the writer that Dutch was spoken in his father's family until after the Civil War.

necessary, a town rate was laid to supply the necessary school buildings.¹

If this school was public, it none the less had peculiar relations with the church. The consistory of the church, during the Dutch period, and in the early years of English control, was conjointly with the civil authorities charged with the care of the school and the selection of masters; although later the power of the consistory declined. A further connection of church with school is seen in the fact that throughout the period, the schoolmaster was (*quasi ex officio*) *voorzitter* and *voorsanger* in the Dutch church. As such not only had he a definite part in the public worship, but in the absence of the minister he took charge of the service and read a sermon. The most intimate phase of this church and school relationship, however, lay in the master's duty to teach religion by having the pupils learn prayers, church hymns, the church formulations, and the Heidelberg catechism, which they recited publicly before the congregation. Doubtless many, perhaps most, felt that the school was principally a subordinate agency of the church for giving religious instruction.

In considering this relationship of church and school, however, it ever needs emphasis to the present-day American mind that the church during this whole period was among the Dutch not conceived of as separate from and opposed to the civil authorities. Rather was it an integral part of a general and closely coordinated institutional scheme which in its totality contemplated the whole of life. Under the English system there was developed an even more intimate interaction among the several parts of this general institutional scheme than had obtained under the Dutch régime. The town meeting in accordance with the Duke's laws elected the churchmasters, and fixed a rate on all for the support of the minister. In time it took over practically all direction of the school. Thus by controlling the financial support of the church and by electing the minister the people in town meeting, whether church members or not, exercised all but absolute control over the church.²

Under these extreme conditions of democratic control, hardly equaled and certainly not surpassed elsewhere in the colonies, the little township of Flatbush maintained its two village schools. In the support of these schools were united the Dutch interest in elementary education and the now growing spirit of American democracy. Both influences agreed in an education of all the children³ in the same school under public auspices. The spirit here seen, multiplied many times in other similar villages, must in large part be the explanation of the early interest of New York State in general public education.

¹ Flatbush town records, 107: 12.

² Col. Laws of N. Y., i, 26, 64; Flatbush town records, 104: 190, 252-3; 106: 16, 26, 81, 113, 150; Eccl. Rec., pp. 794, 1503, 1802, 1940, 1944.

³ For the education of the girls as well as the boys see p. 217.

CHAPTER XIII.

THE SCHOOLS OF OTHER DUTCH VILLAGES AFTER 1664.¹

The accounts already given of the Harlem and Flatbush schools have shown in some detail how typical Dutch villages managed their school affairs. It appears more or less certain that Albany, Bergen, Bushwyck, Brooklyn, Flatlands, Kingston, New Utrecht, Schenectady, and probably many other villages more or less exclusively Dutch in stock and language kept up schools similar to the two already studied. It is quite possible that wherever was found a village predominantly Dutch in language and of sufficient size to maintain a church (but not necessarily a pastor), there—had we the data—one would find almost invariably a school, public in some sense, controlled more or less by the consistory and taught by the voorlezer of the Dutch church.

In 1664 Jans Jurians Becker had, as we saw in Chapter VIII, a "Graunt to keep y^e Dutch school at Albany for y^e teaching of youth to read and to write." This was "allowed and confirmed to him" by the first English governor, who remained in charge until 1668. In 1670 (May 16) it was brought to the attention of Gov. Lovelace that "several others not so capable do undertake y^e like some particular tymes and seasons of y^e yeare when they have no other Imployment." The result of this irregular competition proved to be that "Y^e scholars removing from schoole to another not only give a great discouragement to y^e maister who makes it his business all y^e yeare but also are hindred and become y^e more backwards in their learning." "For the reasons aforesaid," Gov. Lovelace "thought fitt that y^e said Jan Jurians Beecker who is esteemed very capable that way shall be allowed schoolmaster for y^e instructing of y^e youth at Albany and partes adjacent he following y^e said Imployment constantly and diligently." It was besides further allowed to Beecker that "no other be admitted to interrupt him it being to be presumed that y^e said Beecker for y^e youth and Jacob Joosten who is allowed of for the teaching of y^e younger children are sufficient for that place." ²

¹ The records of the Dutch villages have been made available only in a most fragmentary manner. In greater part these records have either been lost or remain as yet hid in the original Dutch MSS. Where fairly complete records exist in translation they have not as yet been printed. So that the adequate treatment of the schools of the many Dutch villages during the English period is at present impossible.

² Munsell's *Annals of Albany*, iv, 15f.

Here then we see two teachers at Albany, one for "y^e younger children" and the other for "y^e youth." Whether they taught in one school does not appear; quite possibly they did. They charged tuition we know, not only from the general customs, but also from the permission granted (1665) to John Shutte to "bee the only English schoolmaster at Albany upon condition that the said John Shutte shall not demand any more wages than is given by the Dutch to their schoolmasters."¹ Probably Becker received a salary from the municipality for serving as voorlezer and schoolmaster, since we find that, during his term of office, "the Charge yearly of y^e Towne of Albany" included the item: "To y^e Reader 400 guild^{en} Zeaw^t."²

Becker and two others were chosen in 1676 to be the only schoolmasters at Albany. How long thereafter he continued to teach is not certain; until 1686 according to Pearson. He died about 1697.³ Jacob Joosten was, as we saw, at Flatbush on November 1, 1670. So that he used the permission here granted for only about six months. He had probably come to Albany upon leaving Wiltwyck in 1665.

Gerrit Swart and Adrian Janse Appel are named by Pearson as the other masters appointed along with Becker in 1676. In spite of the permission for these three to be the only schoolmasters, there was appointed during the same year a baker, Luykas Gerritse (Wingard), "because he was impotent in his hand."⁴

The following council meeting explains itself. Its old English style perhaps makes worth while its full reproduction:

Att a meeting of y^e Mayor, Aldermen and Common Council held in y^e City Hall of Albany, Ye 23d of January 1688.

The request of Cornelis Bogardus by y^e mouth of Mr. Will de Meyer to be admitted a schoolmaster for y^e City is taken into consideration and unanimously doe graunt y^e same, as also a freeman of this Citty upon his arrivall.⁵

This teacher was the son of D^r Bogardus, the second minister of New Amsterdam. He stayed at Albany, it is said, only a short while. In 1703 "Evert Ridder of the City of Albany" made an "humble application to the Mayor, Aldermen and Assistance to be permitted to teach school in the City aforesaid," which was granted.⁶

¹ Munsell's *Annals of Albany*, p. 16.

² Executive Council Minutes, i, 82. (See p. 122, where this matter is discussed.) It appears that this public support of the voorlezer (and possibly the schoolmaster) continued into the eighteenth century. In 1695, "Hend. Roseboom, sen., voorlezer in y^e church of y^e citty of Albany" appeared before the mayor's court asking for the payment of his salary (Munsell, *op. cit.*, iii, 9). The support of Roseboom was divided equally between city and county in 1707, when it was noted in the minutes of the court of sessions that "y^e County (excepting y^e citty and Colony Rensselaerswyck) must be credited for two hundred and fifty Gilders wampum value, being half of Roseboom's sallary and Repairing y^e church yard, which was charged in y^e General County acct" (*ibid.*, iv, 124; see also *ibid.*, pp. 161, 187).

³ Pratt, *op. cit.*, p. 62.

⁴ *Ibid.*, pp. 62-3.

⁵ Munsell, *op. cit.*, iv, 106.

⁶ *Ibid.*, p. 177.

The spirit of religious proselyting was prevalent throughout the period under consideration. The missionary of the Society for the Propagation of the Gospel at Albany writes, in 1710, that his "weak endeavors" have been so blessed that "a great many Dutch children" who at his coming were "altogether ignorant of the English tongue, were now able to distinctly say our catechism and make the responses at prayers." "I have used," he writes, "all possible methods to engage the children to their duty by giving small presents to the most forward and diligent, and by frequently visiting their schools; and for encouraging the schoolmasters I give them what charity is collected in our churches, obliging them to bring their scholars to public prayers."¹ We pass with a smile the partial notion of the children's "duty" and the unusual direction of the "charity" collection; but it is interesting to note the continued use of Dutch and the existence of several schools.

When the Albany church was chartered, in 1720, it was expressly stipulated that "it shall and may be lawful to and for the consistory of the said church to nominate and appoint a clerk or precentor, schoolmaster, sexton, bellringer, and such and so many other officers and servants of the same church as they shall think convenient and necessary."² The natural interpretation of this stipulation is, of course, that in it an old custom is given the sanction of law. It were to be desired that we had more data of the relation of the church and city in Albany school matters. Everything we have that is very definite is on the side of the city's interest.

The common council in 1721 in consideration of the fact that it was "very requisite and necessary that a fit and able schoolmaster settle in this city for teaching and instructing of the youth in spelling, reading, writeing, and cyffering," and in consideration of the further fact that Mr. Johannis Glandorf had "offered his services to settle here and keep a school if reasonably encouraged by the corporation, it is therefore Resolved by this commonalty, and they do hereby oblige themselves and successors, to give and procure unto y^e said Johannis Glandorf free house rent for the term of seaven years next ensueing."³ That this man was Dutch and the school was Dutch may be accepted as practically certain from the fact that the Dutch were so largely in the majority at this time. His name furnishes some corroboration. It is interesting to note that no salary other than house rent is suggested, and also that the church has nothing to do with the matter.

Hamilton, in his trip of 1744, says of Albany: "I went to see the school in this city, in which are about 200 scholars, boys and girls."⁴ This number is surprising, far exceeding that of any other school

¹ Doc. Hist. of N. Y., III, 540.

² Eccl. Rec., p. 2165.

³ Welsch, Hist. of Albany, p. 287.

⁴ Itinerarium, p. 78.

known to us among the American Dutch. The coeducation is an interesting corroboration of the opinion elsewhere discussed.¹ That these 200 pupils were Dutch is altogether probable. For example, Hamilton elsewhere says of his same trip to Albany: "At ten o'clock we went to the English church, where was the meanest congregation ever I beheld, there not being above fifteen or twenty in church, besides the soldiers of the fort who sat in a gallery."² The size of this congregation may be taken as a fair idea of the relative number of English in the city.

With this ends the specific information so far collected that certainly concerns Dutch education at Albany, except that in 1789 it was stated that some seven or eight years previously "a competent English teacher was scarcely to be found in Albany."³ We infer from this that the Dutch language, until about the time of the Revolution, retained its hold so strongly as to prevent the earlier establishment of vigorous or well patronized English schools. It is stated that the first English preaching in the Dutch church was in 1776 and the first regularly settled English pastor was some six years later.⁴

An effort was made by the writer to ascertain the degree of illiteracy of the early Albany inhabitants, somewhat after the manner followed at Flatbush. On account of the lack of similar census rolls, the study at Albany could not be so satisfactorily done. The procedure accordingly was slightly different. Pearson's "Early Records of the City and County of Albany and Colony of Rensselaër-syck (1656-1675)" was used as a basis of study. All the names of those whose manner of signing was given were utilized. Three hundred and sixty such names were listed, of which 77 or 21 per cent made their marks. The corresponding result at Flatbush we found to be 19 per cent. Effort was also made to separate the names according as the school period had been passed in Holland or in America, but with less satisfactory results than were obtained in the case of Flatbush. One-fourth of the whole number could not be assigned even probably to one place rather than to the other. As far as the ascertainable records go, the results are similar to those got in the previous study. Of the 231 assigned, certainly or probably to Holland, 50, or 22 per cent, made their marks; while of the 35 assigned similarly to America, only 4, or 11 per cent made their marks. The corresponding per cents at Flatbush were 26 and 13, respectively. The same tendencies then that were seen at Flatbush appear here independently and with striking agreement. The results at each place give additional weight to those of the other, although the Flatbush figures appear on the whole to be much more reliable.

¹ See p. 217.

² *Itinerarium*, p. 82.

³ *Weiser, op. cit.*, p. 405. The quotation is from *Morse's Gazetteer*.

⁴ *Munsell, op. cit.*, i, 121.

In the village of Bergen at the close of the Dutch period Engelbert Steenhuisen was serving as schoolmaster. His successor appears to have been Reynier Bastiaensen van Giesen, whom he saw at Flatbush from 1660 to 1663. At any rate Bastiaensen took the oath of allegiance at Bergen in 1665¹ and began teaching about that time. His term of service is unique among the American Dutch, as the Bergen church records show: "Reynier Bastiaensen van Giesen buried May 15, 1707, after having filled the office of voorlezer for about 42 years at Bergen."²

That service as voorlezer implies service as schoolmaster hardly needs proof in the case of so small a village as Bergen. But if any were needed there is available fairly satisfactory evidence. In 1673, as we see in the law case given just below, "precentor and schoolmaster" and "schoolmaster" are used interchangeably as referring to one and the same person then serving at Bergen. Moreover, the records of the New York City Reformed Dutch Church show that "Mr. Reynier van Giesen" was witness at baptisms in 1673, 1691, and 1694.³ The title "Mr." considered in the light of the Dutch custom, of Van Giesen's Flatbush school service and of his known connection with the Bergen school in 1673 can hardly be interpreted otherwise than as meaning that voorlezer Van Giesen was acting also as schoolmaster Van Giesen certainly as late as 1691 and 1694; and if he were schoolmaster so late as this we may easily suppose that he continued to teach as long as he acted as voorlezer.

In 1668 a new charter was given the town. In this "all freeholders" were "deemed and accompted Free men" with "a free voice in elections." They were to "choose their own magistrates" and "their own minister for the preaching of the word of God." "All persons, as well the freeholders as the inhabitants" were to "contribute according to their estates and proportion of lands for his maintenance, or lay out such a proportion of land for the ministry, and the keeping of a Free school for the education of Youth, as they shall think fit."⁴

Evidently the town chose to levy the vote rather than "lay out" the necessary land; for on the "18th X^{br}, 1672," the "Magistrates of the town of Bergen" by resolution decreed that "all the said inhabitants, without any exception" shall pay "their share towards the support of the Precentor and Schoolmaster."⁵ This action of the magistrates was deemed by the inhabitants of certain dependent villages to bear hardly on them, particularly as it appears that some of them were of a different "religious persuasion." In the meanwhile

¹ Winfield, History of Hudson County, p. 103.

² The writer is indebted to Mr. Daniel van Winkle, of Jersey City, for this and the two other quotations from the Bergen church records used below.

³ N. Y. Gen. and Biog. Soc. Coll., II, 120, 204, 222.

⁴ Winfield, *op. cit.*, pp. 107-8.

⁵ N. Y. Col. Doc., II, 672.

the Dutch had again united Bergen with New Netherland. The schout and schepens of Bergen accordingly appealed to Gov. Colve and his council (Dec. 24, 1673) "requesting that the inhabitants of all the settlements dependent on them of what religious persuasion so ever they may be, shall be bound to pay their share towards the support of Precentor and Schoolmaster." The governor and council acceded to the request of the magistrates and made the appropriate order.¹

But still the objectors proved recalcitrant. On the 24th of May next, the magistrates complained to the governor that "some of the inhabitants of their dependent hamlets" "obstinately refused to pay their quota to the support of the Precentor and Schoolmaster." The governor general and council persisted "in their previous mandate" and ordered the schout "to proceed to immediate execution against all unwilling debtors."² The next month (June 15) "the inhabitants of Minagagque and Penirepagh" through their agents requested "to be excused from contributing to the support of the schoolmaster at Bergen."³ The magistrates of Bergen were ordered to answer the petition, which they did on July 5. The governor and council, after considering both sides, "resolved and ordered that the inhabitants of Penirepagh and Minagagque shall promptly pay their share for the support aforesaid, on pain of proceeding against them with immediate execution."⁴

With this the contest seems to have ended, though it must be confessed that the equity in the case is not as evident now as it seemed to be to Gov. Colve. This is a clear case of the raising of a schoolmaster's salary by a rate upon the township. Kingston (see page below) seems to furnish a case of a general property tax, from which the schoolmaster was probably paid. New Haerlem also furnished a case quite analogous in many respects to this at Bergen. But so far as the writer has found this is the only absolutely clear instance of a specific school tax among the American Dutch. We have no sufficient reason to suppose that this school was free. On the contrary, every known instance everywhere among the American Dutch points to tuition fees.

Little else is known of the school. Dankers and Sluyter say of the village in 1697, "They intend to build a church next summer. For the present they have nobody except a voorlezer who performs this service for them on Sundays in the schoolhouse where they assemble."⁵ The church records of 1678 and 1680 refer to repairs on the schoolhouse. If it be admitted that the voorlezer of the church was always schoolmaster, the following schoolmasters succeeded Van Giesen:⁶ Adriaen Vermeulen, 1708-1736; Isaac P. van Benthuisen,

¹ N. Y., Col. Doc., II, 673.

² *Ibid.*, p. 714.

³ *Ibid.*, p. 720.

⁴ *Ibid.*, p. 720.

⁵ Long Island History Soc. Coll. I, 157.

⁶ Taylor, *Classis of Bergen*, p. 167-8.

1736-1761; Abraham Sickles, 1761-1789. This Vermeulen is the same one that was at Haerlem, 1699-1708. The Bergen church records say with reference to him: "May 11, 1708, Adrian Vermeulen, voorlezer at Bergen, laid the corner stone (of the new schoolhouse)." The terms of service here given by Taylor are all so long as to raise some suspicions; but as pastor of the Bergen church Mr. Taylor had good opportunity to know. We may add that according to Taylor, Benthuyssen taught in both English and Dutch, but that the records of the church were until 1809 kept still in Dutch.¹ The charter of the Bergen church granted in 1771 contained the usual provision of the Dutch church charters that the consistory may maintain a school.² We should infer from this and all else known that the situation here was generally quite similar to that at Flatbush.

The village of Flatlands appeared in Chapter VIII to have no school organized as late as 1664, although the town itself had by that time been settled some 15 years and chartered 10 years. The first record of the school that has so far appeared is of date 1675. It seemed then to be well established, was under the care of the consistory, and was called "the school of the town." It is stated that the deacons for many years furnished or purchased for the pupils the books used in the school.³ This seems remarkable, and is probably due to a misconception of the record.

Besides the list of voorlezers (presumably schoolmasters), little has been found concerning this school. In 1691 the deacons' records contain sundry salary payments "to the schoolmaster."⁴ Apparently the words schoolmaster and voorleser are here, as elsewhere, used interchangeably. At the close of the century (1694-7) the deacons are building a schoolhouse, on which they pay a sum equal to \$654.40. About the same time (Feb. 3, 1696-7), certain private parties sold "all that house and garden spot, as it is now in fence lying—in the town of Flatlands—now used and occupied for a schoolhouse for said town." It would seem probable that the new schoolhouse owned by the church had thrown upon the market a privately owned house up to that time used "for a schoolhouse for said town."⁵ In the petition for a charter to the church in 1711 we find among the land holdings of the church, "And allso the church in said Town and one house called the school howse with the Land adjoyning containing two acres or thereabouts."⁶ Evidently this is the schoolhouse built some 10 or 15 years before. In 1762 a considerable sum was spent "for the schoolhouse;" in 1771 a "well for the schoolhouse," cost £1 11s. 3d.⁷

¹ Taylor, *Classis of Bergen*, pp. 101, 167.

² *Ibid.*, p. 121.

³ Stiles, *History of Kings County*, p. 76.

⁴ *Doc. hist. of N. Y.*, III, 113.

⁵ Stiles, *History of Kings County*, p. 77.

The following receipt referred by Pratt to Flatlands throws light on the early introduction of English into this Dutch school:

1708.—Jacobus Montfort hath been to school from May 4th to July 4th, which is 2 months now, from the 2d Sept. to the 2d Octob^r is one month, altogether 3 months.

Comes to 10 guilders.

I. SELOVER

Schoolmr¹

If the point were of greater moment closer scrutiny would be necessary before basing argument upon a paper no better vouched for; but accepting it as it stands, the presumption seems to be that Selover was in 1708 already using the English language in his school. To the same effect is another receipt in English, found among the Flatlands church papers, given in 1733 by Abraham De Lanoy to "the Deacons of the church of Flatlands" for the "sum of six pounds, being in full for a year's salary." This Abraham De Lanoy is almost certainly the one whom we saw (p. 152) teaching in the New York school, 1743-7. An apprenticeship contract of 1765 bears testimony to the existence of a night school, it being stipulated that the master "shall teach and Instruct or Cause to be taught or Instructed" the apprentice "to Read, write, and two Quarters night schooling of Syphering."²

The complete list of Flatlands schoolmasters (voorlezers), according to Rev. Anson Du Bois,³ is as follows:

William Garretse (van Kouwenhoven), 1675-1688; Jan Brouwer, 1688-1691; Pieter Tull, 1691-1704; Martin Schenck, 1704-1712 [this date of 1712 is apparently contradicted by Selover's school bill quoted above]; Isaac Selover, 1712-1715 [these dates are contradicted by the Flatbush records of page 179]; Jan Suydam, 1715-29(?); Johannes van Siggelon, 1729-1733; Abraham de Lanoy, 1733-1742; Johannis Nevius, 1743-4; Abraham Voorhees, 1744-7; Lukkas Voorhees, 1748-1752; Derick Remsen, 1752; Luykas Voorhees, 1755-68 (?); Abraham Voorhees, 1768-92.

For some unaccountable reason the town of Brooklyn gives no positive evidence regarding a Dutch school after the English occupation. It is incredible that no school was maintained; for Brooklyn, in size, early forged ahead of the other Dutch towns on Long Island. But when in 1711 Brooklyn, Flatbush, and Flatlands petitioned for a church charter, the latter two churches owned schoolhouses, while Brooklyn does not include a schoolhouse among the church property.⁴

To strengthen the presumption from general considerations that the Brooklyn people did not lack educational facilities, certain illiteracy records of 1663, 1708, and 1723 may be presented in contrast. At the earliest of these dates a petition of 28 inhabitants of the village showed 9, or 32 per cent of the whole, who made their mark.⁵ In 1708 a similar list of 56 members of the village church shows 52 men,

¹ *Loc. cit.*, pp. 117-118.

² Flatlands church records.

³ Stiles, *History of Kings County*, p. 76.

⁴ *Doc. hist. of N. Y.*, III, 113.

⁵ *N. Y. Col. Doc.*, XIV, 522.

of whom 11, or 21 per cent, make marks.¹ For 1723 there are similarly 60 names, of whom 57 are men; of these 11, or 19 per cent, make marks.² These figures would indicate an improvement somewhat similar to what was found at Flatbush,³ though the record here is not so good.

The little village of Kinderhook by a fortunate accident got into the colonial records in connection with the domineering Gov. Cornbury. In 1702 "one Paulus van Vleck" had been "lately called by some of the Inhabitants of Kinderhook to be their clerk without any license from his Excellency for so doing." As Van Vleck had previously been forbidden by the governor to preach, he was called before the governor "to answer his contempt" for presuming to act now as clerk.⁴ In reply to this demand, certain inhabitants of Kinderhook gave a certificate that Van Vleck had, "during the whole of the time that he hath resided here and since he was accepted as Precentor and schoolmaster of our church," properly deported himself and had not preached "in house or barn."⁵ It further appears in the same paper that "one Hendrich Abelsen before his death" had filled the office of Precentor and schoolmaster; that Joghem Lamersen had succeeded Abelsen, but had resigned, and that Van Vleck had then been called.

Some seven years later (1709) Van Vleck had "for some years past performed a reader's duties" at Kinderhook.⁶ He was then entering the Dutch ministry. Beyond this nothing is known of the Kinderhook school. It is of interest, however, to note that this little place sustained a reader and schoolmaster, and also that Lord Cornbury exercised here the right of licensing schoolmasters with the same determination that he had shown elsewhere. Of Van Vleck himself it is known that in 1710 he joined the Presbytery of Philadelphia, but later withdrew pending a trial for bigamy, drunkenness, swearing, etc.⁷

The early history of Poughkeepsie shows us something of the lack of schools and the attitude of the church authorities in the matter. A letter of D^r van Schee written in 1730, shortly after he had taken charge at Poughkeepsie and Fishkill, tells us that "it can hardly be believed what trouble and toil a minister has to introduce any civility into these places where there never has been a minister before." "Most of these people can neither read nor write." (The records

¹ Kings County Conveyances, iii, 230.

² *Ibid.*, v, 41.

³ See p. 197. A paper drawn up at Flatbush under the same circumstances and in the same year as the Brooklyn, 1708, paper here quoted, gave an illiteracy of 12 per cent.

⁴ Doc. hist. of N. Y., iii, 538.

⁵ *Ibid.*, p. 539.

⁶ Eccl. Rec., p. 1769.

⁷ Records of the Presbyterian Church in the U. S. A. (Philadelphia, 1841), pp. 17, 21, 25, 31-2, 35, 37, 39.

show that of the two consistories of Poughkeepsie and Fishkill, only one in each made his mark.)¹ "Finally in reference to a good schoolmaster; although one is very much needed in each of my charges, yet the churches are not in a condition to call one. But I live in the hope that when the churches, which are yet young and newly organized, have grown somewhat, in the course of time, that they will then make provision; for there is a good enough chance for this in this congregation."² In reply to this letter, the classis wrote, "We hope that your congregation will soon feel itself able to appoint schoolmasters, in at least one of your charges, for the instruction of the youth. This is a matter of the utmost importance."³

No connected history of these two congregations can be given; but in 1765, when these churches with New Hackensack and Hopeful call a pastor, each church has its own *voorlezer*,⁴ which would possibly mean that each now had a schoolmaster.

Of the village of New Utrecht, the first definite knowledge of the school appears in connection with the Leisler rebellion which, as we saw, entered likewise into the history of the Flatbush school. When "some ill men from New Utrecht" were marching "towards the fort ag^t the kings forces," they "then did threaten Joost DeBaane y^e schoolmaster and reader of said town to turne him out of that Imploy because he refused to side with them in theire Rebellion." Afterwards, when the rebellion had been quelled, "some of those disaffected persons without any cause given forced the said Joost de Baane to forsake the place."

In view of these facts the minister (the same one that had suffered at Flatbush) and the justice of the peace, Jacques Cortelyou (who had given "out of his proper estate y^e land out of which the schoolmaster and reader is maintained"), petitioned the colonial governor "in the behalf of the said Joost de Baane" that he might be continued "schoolmaster and reader of the said Towne" and that he might be allowed his salary from the time when he was "causeless turned out."⁵ The governor took the side of the petitioners and ordered (1692) that "A Lysence be granted unto the said Joost De Bane," that he receive the salary asked and that the justices "suffer none other to officiate in the quality of a schoolmaster in the s^d Towne without a Lycense from the Government."⁶

In Flatbush the incumbent had sided with the rebels, and the minister had him turned out. Here the incumbent had declined to side with the Leislerians, and the town (or consistory?) had turned him out. In both cases the minister carried his point against the people by an appeal to the governor. Evidently from the foregoing there was a regular school, whose master was supported by the rent from school lands.

¹ Eccl. Rec., p. 2502.

² *Ibid.*, p. 2500.

³ *Ibid.*, p. 2504.

⁴ *Ibid.*, p. 3984.

⁵ N. Y. Col. MSS., xxxviii, 154. (Quoted in Pratt, *op. cit.*, p. 74.)

⁶ Council Minutes (MS.), vi, 111. (Quoted in Pratt, *op. cit.*, p. 74.)

It is nearly a century before our next item. In 1768 a public subscription of £39 7s. 3d. was taken to repair the school.¹ As the town minute of this is in English, we can not certainly say that the school was a Dutch school. But as the English is very bad English and as every name, but one or two, on the subscription list is Dutch, it would be easy to suppose that English was then taught in what was in origin and control a Dutch school. Some years later (1777) we find that "Jacques Denise hirred the Church Land for ten years £6-5-0 per year and three acars of (sic) for the schoolmaster, Peter Muenenbeldt."² While the words are a little uncertain, it would seem that the custom found at Flatbush held here in regard to the use of church and school lands for the support of the school.

The town of Schenectady was settled toward the close of the Dutch régime, being surveyed officially for settlement in 1664. Of school matters little has been found. In 1681 the "commissioners of Schaenhechtade" wrote to the classis, "we have always had a voorlezer."³ We elsewhere learn that the voorlezer at this time was Reynier Schaets,⁴ the son of D^e. Schaets, of Beverwyck, previously mentioned. We should hardly doubt that Schaets was also schoolmaster, did not Pearson, the historian of Schenectady, say, apparently on documentary evidence, that he was a "chyrurgion."⁵ It is, of course, possible that he was both schoolmaster and surgeon, but the combination was unusual and hardly compatible. Dankers and Shuyter, those cynical seers, said that the village proper consisted (1680) of about 30 houses, "having only a homily (postyl) read on Sundays;" and that the parish reader (*voorlezer van de plaits*) "was a little conceited."⁶

Pearson gives a partial list of the voorlezers; Jan Dellamont, 1735-1749, salary £7 to £12; Philip Riley, 1750-1757, salary £8-10 to £14; Johannes van Sice, 1756-1766, salary £12; Daniel Price, 1768; Pieter van Benthuisen, 1760-1770, salary £12; Cornelis De Groof, 1771-1800, salary £20.⁷ The first use of English in the church was in 1794, when an arrangement was made for one sermon in English every two weeks.⁸

After the revolution (1785) there is found in the minutes of the consistory an interesting use of school terms. The consistory were about this time negotiating with the magistrates for the improvement of the common schools (*triviale schoolen*) of the town and for the

¹ New Utrecht town records (MSS.), 200: 219-220. (Brooklyn Hall of Records.)

² *Ibid.*, p. 234.

³ Eccl. Rec., p. 788.

⁴ *Ibid.*, p. 830.

⁵ Contribution for the genealogies * * * , of Albany, p. 96.

⁶ Long Island Hist. Soc. Coll., 1, 311, 315.

⁷ History of Schenectady Church, pp. 160-1.

Ibid., p. 128.

establishment of an *Illustre School* or academy.¹ Here we have a double instance of the deterioration of terms, "trivial school" had been reduced from its position of a grammar, rhetoric, and logic school to one of the three R's, while "illustre school" had similarly been reduced from a university to a secondary school.

It is probable that when the records of the village of Kingston are made available by publication (as surely must be done some day), a very interesting school history will be found. So far, however, little information is accessible. From some secondary sources² it seems that Jacob Joosten, who was in Wiltwyck at the close of the Dutch period, remained there for about a year after the English occupation.³ Perhaps there was an interim after he left. According to the same secondary source, Matthys Capito, secretary of the Esopus, sued in 1665 one Hester Dousouse for the schooling of her daughter.³ Capito, however, could have served only temporarily, for on June 7, 1666, Willem de la Montagne, brother of the trivial schoolmaster of 1652, was at the request of many residents appointed schoolmaster.³ Later, "at an ordinary session of the court at Wiltwyck, September 6, 1667, Willem La Montagne asks by petition for salary because in the absence of a pastor he is filling both places, that of forereader and foresinger in the church here." He was granted "an annual salary of five hundred g'ders light money⁴ over and above his salary as foresinger, besides free rent."⁵

The same day the court gave Montagne permission to "occupy the front part of the village house and one-half of the upper floor, the hon. court reserving the back portion of the house besides the other half of the upper floor and the cellar to its own use." It would seem, then, quite probable that the school was held in the "front part of the village house." This "village house" was "the Domine's House or Town House," built for D^e. Blom in 1662 at a cost of 3,000 florins.⁶ Reference is made in the Executive Council Minutes in 1669 to the "frequent use of it both for Religious Dutyes and Civill Affayres."⁷

Cornelius Hooageboom, on November 17, 1668, petitioned the court to be allowed to keep an evening school. His request was denied, "because Wilhelmus La Montagne has been appointed, and he does it winter and summer, and petitioner is unwilling to do it in summer. Therefore, nobody else (than Montagne) will be permitted to keep school in winter."⁸ This seems to be an exact repetition of the

¹ Pearson, *History of the Schenectady Patent*, pp. 433-4.

² Pratt, *op. cit.*, p. 51.

³ Holland Society Yearbook, 1897: 126.

⁴ That is, wampum; worth then possibly about 3 for 1. The 500 guilders would accordingly be worth about \$67.

⁵ Old^e Ulster, 2: 272.

⁶ Executive Council Minutes, 1, 270-1; N. Y. Col. Doc., xiii, 229 f. This sum would be \$1,200.

⁷ *Loc. cit.*

⁸ Old^e Ulster, 1: 237.

situation which we saw at Albany. Hooegeboom wished to keep school during the long winter evenings, when he had nothing else to do. The court felt that this would be unjust to Montagne, who lived solely by his work in school and church. We need not doubt, and indeed it is said to be expressly stated, that Montagne taught in the day as well as evening.¹ Although Hooegeboom was disappointed in the petition presented in 1668, on October 23, 1671, he was elected schoolmaster for two years and was given a portion of the village house rent free.²

If—as seems highly probable—this Hooegeboom's salary was a part of the "Publick Charge of the Towne," we have a case where the schoolmaster's salary came in part from a specific tax levy. The "Excize" paid in 1672 "the Summe of sixteen hundred Guild^{rs}" towards the "Publick Charge of the Towne;" but this was not sufficient, and accordingly a "Voluntary Contribution," or "Tax" (as it is indifferently called), was imposed "upon each Morgen of their Improved Land, as also upon their Working Horses and Milch Cowes." "The said Voluntary Contribution" was to "bee Collected & paid in to Mr. Isaak Gaveratt the schout in good Corne."³ The "Voluntary Contribution" is in part a repetition of what took place at New Haerlem; only here it seems to have been more nearly a mere tax rate.

In 1704 Lord Cornbury licensed Stephen Gracherie "to read the service of the Low Dutch Church at Kingstone * * * until you receive further orders from me." The same paper further states "You are likewise hereby impowered to and licensed to keep a reading and writing school at Kingstone aforesaid, until you receive orders from me to the contrary."⁴

It will be recalled that it was Lord Cornbury who interfered in New York with the appointment of a schoolmaster by the Dutch church. This license of Gracherie is a part of the general scheme either of Lord Cornbury or of the English Crown to win the Dutch away from their church allegiance.⁵ When Dom^o Nucella left Kingston, in 1704, Cornbury "appointed the Rev. Mr. Hepburn to preach and to read divine service to them, whereby the English who had never a minister among them, have the benefit of public worship, and are good hopes of bringing the Dutch to a conformity."⁶ There were at this time "not six English families in the place," according to the next Dutch minister.⁷ And Rector Vesey in the

¹ Old^o Ulster 1: 237.

² Holland Society yearbook, 1897, p. 123. Evert Nolden intervened, however, being appointed in 1669, *ibid.*, p. 127.

³ Executive Council Minutes, I, 159-160.

⁴ Eccl. Rec., p. 1574.

⁵ *Ibid.*, p. 1488.

⁶ Report (1704) on the state of the church," by Will^m Vesey, the rector at Trinity. Doc. Hist of N. Y., III, 77.

⁷ Eccl. Rec., p. 1617.

report above quoted admits that "the Rev. Mr. Hepburn has at present small encouragement from the people." A new Dutch minister from Holland (D^r Henricus Beys) was denied the right to preach without Cornbury's license. "He (Cornbury) threatened," wrote D^r Beys, "that if I presumed to go and preach without it he would drive me away and banish me from his Government."¹ In this letter we have the history of the Gracherie license:

I also learned that the schoolmaster formerly appointed by my consistory had been demanded, under oath, who had appointed him to that office and how he had dared to accept the position of reader and schoolmaster without his Lordship's license. He was told in the most severe tones and with threats that if he did not ask for and accept his Lordship's license, he (the Governor) would know what to do with him. He was thus compelled, with the knowledge and consent of the Consistory, to ask for and receive such a license.²

How Cornbury could expect success from such extraordinary proselyting is impossible to see. His power, however, was ended by 1708, and no subsequent governor interfered in so high-handed a manner.

We note in the last extract that the consistory at Kingston appointed Gracherie in the first instance. This may be a full statement of the case, but more likely the town court had its part in making the contract. Little else has been found concerning this school. In 1733, when Gerrit van Wagenen was called to be schoolmaster, etc., for the Dutch church in New York, it was said that he is "at present Foresinger in the Low Dutch Reformed Congregation at Kingstown." Almost certainly he was also schoolmaster.

So far as the facts are ascertainable we have substantial agreement in the management of the school at Kingston with what we saw at Flatbush, the same union of secular and religious functions with schoolmaster and voorlezer, the same conjunction of civil and ecclesiastical authorities in the support and control of the master.

In concluding the chapter little remains to be said. A few disconnected facts may be added. Daniel Bratt, called to the mastership of the Dutch church school in New York (1749), is referred to as "chorister at Catskill."³ Similarly, it was resolved by the consistory of New York in 1753, "since the precentor's place in the Old Church is now vacant, that the president should write by the first opportunity to Mr. Harmanus Van Huyzen, schoolmaster at Tappen, and request him to exercise his gifts here."⁴ It was previously seen in reference to Hackensack (1693) "that there is a certain cooper from Sluys, William Bertholf, who is also schoolmaster and precentor there."⁵ In the contest over local church government the Holland party complained that Frelinghuysen, the opposition leader, permitted "Jacobus Schuurman to be a schoolmaster among them, in spite

¹ Eccl. Rec., pp. 1615-6. ² *Ibid.*, p. 1617. ³ *Ibid.*, p. 3025. ⁴ *Ibid.*, p. 3409. ⁵ *Ibid.*, p. 1051.

of his not only, not teaching but even forbidding the children to say the Lord's prayer."¹ This was at Raritan, in 1725.

All such references to otherwise unknown school situations would lead one to believe that only lack of data prevents our seeing a widespread system of quasi public schools fairly coextensive with the sphere of dominant Dutch influence. In Bergen and Albany the interest of the civil authorities in the matter of schools is evident. With the exception of the town rate at Bergen, and possibly a somewhat similar rate at Kingston, no specific taxes are known to have been levied for school support. Probably all of the chartered towns studied had much the same policy toward the problem of education. The municipal court felt, on the whole, responsibility for the school-house and the master's salary. The church consistory on its part felt the responsibility of stirring the civil authorities to action and of advising with them in the appointment of schoolmasters. Apparent deviations from these terms of relationship are to be closely scrutinized and may represent the feeling of the civil or religious reporter, as the case may be, that his party was the principal actor. While the original Dutch policy was that of maintaining a harmonious agreement between the secular and the religious authorities in the management of schools, it is none the less true that on the whole the influence of the secular arm grew, as time went on, beyond that of the church; so that in most, if not in all, of the Dutch villages, there was in time the normal development of a purely secular public school. The Dutch villages in this regard present a marked contrast to what has been found in certain other colonial communities where non-English speaking people have predominated.

¹ Eccl. Rec., p. 2257.

CHAPTER XIV.

THE ELEMENTARY SCHOOL FROM WITHIN.

Not even the slightest connected account of the inner life of the Dutch American school has come down to us. If only some school-boy had written his experiences to his grandfather back in the Netherlands, or if some master had in a long gossipy letter to a Holland friend related the trials of school keeping in the new country, we might be able to present to the reader a more satisfactory account of the school as master and pupil saw it. In the absence of even one picture made on the spot, nothing is left but to piece out an account from scattered hints, here a little and there a little, binding the whole together with our general knowledge of Holland custom.

The school hours in Dutch America were almost universally from 8 to 11 in the forenoon and from 1 to 4 in the afternoon.¹ The annual calendar, however, is not so simple. Apparently, the school was kept through the year, that is, both in summer and in winter.² The specific statements are not so conclusive as might be wished; but in the light of the Holland custom we have no difficulty in accepting the statement as made. The pupils were free "on festival days—and according to custom on Wednesday and Saturday afternoons."³ This again was the rule in the Holland schools. The "festival days" probably varied in different places, but quite likely most of the children of New Netherland enjoyed St. Nicholas day (December 6), Christmas, New Year, Twelfthnight, Easter, Pinkster (Whitsuntide), and Kermis.⁴ The Dutch custom both in Holland and America was to hold school six days in the week, although by 1773 Flatbush had come to the present American practice of "five days in each week."⁵

The schoolhouse presents a most striking contrast to those known now to most of America. Almost invariably school was held in the

¹ The only exceptions found were in New York church schools, where in 1726 the first morning hour was nine in summer and nine-thirty in winter (Eccl. Rec., p. 2338); and in 1733, where the winter morning hours were from eight-thirty to eleven-thirty (*Ibid.*, p. 2626). See minutes of the orphan masters, ii, 115; Flatbush town records, 105: 207, 107: 60; Pratt, *op. cit.*, p. 67; Strong, *op. cit.*, p. 110; Flatbush consistory minutes, pp. 39, 49.

² If only there were sufficient pupils at New Lotts (1681) and Flatbush in 1681 and 1682. These are interesting cases in that the year was divided into two parts; one more formal in charge of the master, the other less formal in charge of his wife (see pp. 173, 187.). On the calendar in general, see N. Y. Col. Doc., i, 155; Flatbush town records; 105: 207, 107: 60; Flatbush town consistory minutes, pp. 40, 49, 61; Eccl. Rec., pp. 2338, 2626, 4261.

³ Eccl. Rec., p. 2626.

⁴ Griffis, *The Story of New Netherland*, p. 150. For the Synod of Dort church days, see Eccl. Rec., p. 4224.

⁵ Flatbush town records, 107: 60 (sec. 4).

master's residence.¹ The size of the schoolhouse appears to us ridiculous even for the few pupils then to be accommodated. We saw that the burgomasters at New Amsterdam petitioned in 1662 for a school lot 30 by 15 feet, and that the town of New Haerlem in 1680 built "the townhouse for the voorlezer" 22 feet long and 20 feet wide.² The largest schoolhouse noted was the one proposed at Beverwyck, 34 by 19 feet.³ When we recall that these measurements included possibly one or more living rooms in addition to the schoolroom we can only wonder. As to the internal arrangement of the schoolroom and its furnishings we can say but little from American data. We may suppose that, following the Holland custom, the room contained the master's chair and desk and a number of benches probably without backs. The pupils were seated in such a way that the oldest were nearest the master, and the girls were farthest off, sometimes in a corner. Tables, presumably for writing, were also provided; certainly at Flatbush, if not generally.⁴

We have just said that the girls were probably separated from the boys. The question has been raised as to whether girls did in fact attend these schools. The answer seems clear. The Holland custom was most certainly for girls to attend school. The strong presumption would then be that the same custom prevailed in New Netherland, and only positive evidence to the contrary could make us doubt it. Curiously enough there has appeared no explicit statement prior to 1733 that girls did attend the Dutch schools of America. At that date it was required in the New York school that "the school children, both boys and girls," should recite on Saturday forenoon the appropriate "Lord's Day."⁵ An equally explicit reference and even more significant, coming as it does from a more purely Dutch center, is the testimony of Hamilton in his *Itinerarium* (1744) that in the school in Albany there were "about 200 scholars, boys and girls."⁶ But if there be no earlier explicit statement, evidence on the question is not lacking. The marriage contracts and wills, in particular, contain much pertinent material.

It was the Dutch law that before a widow or widower, the parent of minor children, should remarry, guardians—other than the contracting parties—should be appointed for the children, and the affiant parties should appear before official orphan masters and make formal agreement regarding the care of the child or children and of the property to them due.⁷ Quite a number of such marriage contracts are on

¹ The only certain exception noted to the contrary was at New Haerlem. See p. 161.

² See pp. 92, 164.

³ See p. 119.

⁴ See p. 192.

⁵ Eccl. Rec., p. 2626.

⁶ *Loc. cit.*, p. 78.

⁷ See Minutes of the Orphan Masters, *passim*.

record, and in them we find definite references to the education of girls. In 1632 a contract was drawn promising with regard to Resel [Rachel] and Jan "both minor children," "to keep them at school, to teach them a trade."¹ A boy and a girl are here to be treated alike. The same is true of the contract drawn by D^r Everardus Bogardus and Annitje Jans. The children are Sarah, aged 16; Tryntje,² aged 13; Lytje, aged 11; Jan, aged 9; and Annitje, aged 5. The affiants here promise "to keep them at school and let them learn reading, writing, and a good trade."³ In another contract of the same year, the children are both girls, Catrina and Johanna, and the promise is to "let them learn to read and write and have them taught a trade."⁴ The reader will note that even in this case, where only girls are concerned, a trade is none the less to be taught. So of Aelje Claes (1643), "to clothe her, to send her to school, to let her learn reading and writing and a good trade."⁵ Sometimes accomplishments more evidently feminine are mentioned; thus, in 1663, "instruct her in God's word, let her go to school, have her taught to sew."⁶ Thus, according to the marriage contracts, girls were expected to go to school and to learn to read and write. We may add that in no marriage contract examined has there been found any discrimination against girls and in favor of boys, either in the fact or the extent of schooling. So far as this evidence is concerned the sexes are on an equal footing.

Quite similar testimony appears in the wills of the period, though here the evidence is not quite so satisfactory as the foregoing, because of the later dates and the consequent uncertainty as to whether we have the pure Dutch tradition. However, since the English custom discriminated against girls,⁷ we need not on the score of possible English influence discount to any great extent the force of the argument. In the will of Christopher Hoogland, of New York (1676), it was said of four boys and one girl, "they are to be caused to learn to read and write, and a trade by which they may live."⁸ Similarly in 1680 Cornelius van Bursam, of New York, gave instructions to his wife: "She is to maintain my daughter Anna decently, and cause her

¹ N. Y. Col. MSS., I., 6.

² Names ending in *je* are feminine.

³ N. Y. Col. MSS., II., 20.

⁴ *Ibid.*, p. 22.

⁵ *Ibid.*, p. 64.

⁶ Minutes of the Orphan Masters, I, 231. Other similar references that refer to the education of girls are: N. Y. Col. MSS., III, 159; Minutes of the Orphan Masters, I, 25, 28; *ibid.*, II, 20, 24; Early Records of Albany, 327, 346, 391; Flatbush town records, 105: 68, 180, 184, 185. Contrary to statements sometimes made, not all such marriage contracts contained specific educational clauses, e. g., Early Records of Albany, pp. 47-48, 49-50, 311; Flatbush town records, 105: 85; N. Y. Col. MSS., I, 231, and others. None of these here noted are later than 1670.

⁷ For instance, Thomas Foster, of Jamaica, says in his will of 1663: "My children are to be taught to read English well, and my son to write when they doe come of age." N. Y. Hist. Soc. Coll., 1892: 19. For other instances of discrimination, see *ibid.*, 1900: 174, 301, 309.

⁸ N. Y. Hist. Soc. Pub., 1892: 142-3.

being taught reading and writing and a trade, by which she may live."¹ John Hendrickse van Bommell, of New York, included in his will of 1689: "My daughter Lyntie is to be maintained and put to school and learning until she is twenty years of age or is married."² These wills seem to show the same attitude toward the education of girls that was found in the marriage contracts.

While we should have been glad to find in the records of the Dutch days some explicit reference to the school attendance of girls, still the existence of the Holland custom (dating in the case of Utrecht at latest from 1583), the desirability, if not the necessity, that the girls have their religious training in the school, the ample corroboration afforded by marriage contracts and wills, and the explicit reference to girls and boys in the New York school of 1733—all these seem to put it beyond a reasonable doubt that in the ordinary Dutch parochial school girls as well as boys attended, at least until they learned to read.³

Of the schoolmasters not much can be said. It would be desirable to know the extent of their learning, but little evidence is available. While no indication has been found that any of the parochial masters were university trained, there is no reference which would certainly disparage their learning. The few specimens of handwriting seen by the writer would indicate, on the whole, formed intellectual habits rather than the contrary. Jan Tibout presents the only exception.⁴ We have noted from time to time what additional duties some of the masters carried along with their school duties. Almost universally the parish schoolmaster was also voorlezer and voorsanger. The only instances to the contrary were one at Albany and two at Flatbush,⁵ and these were not all certain. Somewhat more often was there a voorlezer who was not the schoolmaster. Several instances were noted at Albany and at Flatbush and possibly one at Schenectady.⁶ The instances of later New York where the voorlezer, or catechist, was not also schoolmaster are hardly to be mentioned; since at that time there were in New York several churches and but one Dutch schoolmaster. In the small villages the schoolmaster was regularly not only voorlezer and voorsanger, but he was also sexton and frequently either court messenger or clerk of the town court. We may suppose that he also drew legal papers. This is so inherently probable as hardly to need proof, but there is corroborative evidence in the records.

¹ N. Y. Hist. Soc. Pub., 1892, p. 120-1.

² *Ibid.*, 1893: 417-8. Other Dutch wills that bear on the question of the education of girls are found in N. Y. Hist. Soc. Pub., 1892: 161, 297-8, 342, 451; 1893: 275-6, 279, 294; 1900: 191, 259, 313; 1902: 122; Flatbush town records, 100: 90.

³ See p. 229 for discussion of the illiteracy of women.

⁴ See p. 172.

⁵ See pp. 120f 179, 181, 183.

⁶ See pp. 120, 179, 211.

The curriculum of the school has already been given in part; and we may here bring together the scattered statements. What might be called the official Dutch program for the colonies was that promulgated by the classis in 1636 in the instruction "for schoolmasters going to the East or West Indies":

He is to instruct the youth—in reading, writing, cyphering, and arithmetic, with all zeal and diligence; he is also to implant the fundamental principles of the true Christian religion and salvation, by means of catechizing; he is to teach them the customary forms of prayers, and also accustom them to pray; he is to give heed to their manners and bring these as far as possible to modesty and propriety.¹

This curriculum we may divide into three parts, the three R's, the religious training (the catechism and forms of prayers), and manners. The last, so far as appears, was to be taught incidentally; and nothing further about it is found in the American records.

How far this curriculum was actually carried out needs to be considered; for school orders and school practice have not always agreed. Out of 30 (distinctly Dutch) marriage contracts studied, 20 specify the education to be given, and each of these stipulates reading and writing. In no case does reading or writing appear separately, and in no case does arithmetic or any other school study appear. (We may add that 11 of the 30 specify a trade; and in the case of 2 girls, sewing was mentioned). Out of 17 Dutch wills (prior to 1725) which refer to education, 9 specify reading and writing, again neither study appearing separately. One of these (1683) says arithmetic, and 10 say a trade. It would appear from this that, on the whole, reading and writing were counted necessary, but that arithmetic was not in the public consciousness as a required, or even a desirable study. To the same effect we may quote the Great Remonstrance that the children should be instructed "not only in reading and writing, but also in the knowledge and fear of the Lord." Again, the petition for a Latin school (1658) says of the youth that they are very numerous and "many of them can read and write."² Similar statements appear in 8 of the 11 curricula of the Dutch villages (outside of New York City). In each we find reading and writing (with spelling in several instances). In two instances only, Albany in 1721 and Flatbush of 1773, does arithmetic appear. In the latter instance, the records say, "arithmetic, so far as it is possible for him, in case such is desired of him"³ but this is so near to the Revolution as to constitute the exception which proves the rule. In the account of the South River school in 1657, as it is given in the Ecclesiastical Records, the translator seems to think ciphering was implied, but a sufficient reason for this opinion does not appear.⁴

¹ Eccl. Rec., p. 98.

² Rec. of N. A., iii, 15-6.

³ Flatbush town records, 107: 60.

⁴ Eccl. Rec., p. 402.

So far then very little arithmetic is found in the schools of Holland America. We have, however, yet to examine the formal curriculum of New Amsterdam and Dutch New York. Here we find an interesting exception. While the outlying Dutch villages, except commercially minded Albany, offer only reading and writing, New Amsterdam (later New York), so far as we can say, always included arithmetic in its curriculum. Evert Pietersen's instructions of 1661 mention arithmetic specifically.¹ In the legislation of the director general and council (1664) on public catechizing for the New Amsterdam school, "reading, writing, and arithmetic" are mentioned.² After this no curriculum is given until 1726, but in that and all subsequent curricula arithmetic is included. Further, we have the curricula of four private schools in New Amsterdam; in two of these we find arithmetic.³ Arithmetic was thus a commercial subject, and formed a part of the curriculum only where the demands of trade made it desirable.⁴

In the foregoing discussion we have several times referred to the fact that in all the data cited reading and writing appear together if at all. In all the writer's reading three exceptions to this rule were found. Each instance treats of a girl's education, and in each reading alone is mentioned. The first is the adoption by a father of his illegitimate daughter (1643). He promises "to let her learn to read."⁵ The next is a case of apprenticeship by the deacons at Albany in 1710. "The master shall teach her, or cause her to be taught to read."⁶ The third is a will of too late a date (1770) to be included in the study given above. A daughter is to have "as much education as to enable her to read the Holy Scriptures, either in English or Dutch."⁷ That the three should be girls is probably significant. They must therefore be grouped with that large per cent of women who could not write their names. These cases, however, form no exception to the statement made above, that nowhere in the literature of the elementary Dutch schools has the writer found an instance where, girls and boys both being mentioned, the girls were discriminated specifically against. The English-speaking colonies are full of instances of positive discrimination, both as to fact and extent; but no expression of such discrimination has been found among the Dutch.

We seem, then, to find that the Dutch of America followed the early seventeenth-century traditions of the fatherland: Reading and

¹ See p. 68.

² O'Callaghan, *Laws of New Netherland*, p. 461.

³ N. Y. Col. Doc., xiv, 424; Rec. of N. A., II, 346; Pratt, *op. cit.*, pp. 21, 33.

⁴ Thus in 1712 Dr. Freeman writing to Amsterdam of an orphan, Girard de Peyster, of New York, says: "He has gone through arithmetic in his studies, for he does not know what God may lay upon him to do." (Eccl. Rec., p. 1958.)

⁵ N. Y. Col. MSS., II, 4.

⁶ Munsell, *op. cit.*, VII, 236.

⁷ N. Y. Hist. Soc. Pub., 1900: 238.

writing for both girls and boys, with but little arithmetic save in the more commercial atmosphere of the capital and at Albany. The only secular subject other than the three R's found in Holland was the *Spiegel der Jeugt*, a history of Dutch wars used from about 1650. The only similar reference in America so far found is in "9 Historical school books" which belonged to schoolmaster Abraham de la Noy's estate in New York, 1702.¹

The religious part of the program was much stressed. It included certain prayers, the catechism, and hymns. If we may piece out our knowledge of American procedure by regulations in Holland, the daily order was for the pupils to take turn in saying "the morning prayer" at the opening of school; and likewise in the "prayer before dinner" on leaving for the noon recess. On reassembling, there was the "prayer after dinner," and "the evening prayer" when leaving at the close of the day. After the pupils had learned these they were taught the Lord's prayer, "the twelve articles of the Christian faith," the ten commandments, and afterwards "the confession of sins" or prayer before the sermon. Besides all these, were taught "the small and the large [Heidelberg] catechism and the gospel for each Sunday." "Before school closes," say Pietersen's instructions, "he shall let the pupils sing some verses and a psalm." Van Ekelen's evening school at Flatbush was required to "begin with the Lord's prayer and close by singing a psalm." There was one public weekday catechising in the church. In New Amsterdam this catechising was fixed by the director general and council for Wednesdays. Pietersen and his assistant "with the children entrusted to their care" were required to "appear in the church to examine, after the close of the sermon, each of them his own scholars, in the presence of the reverend ministers and elders."² At Flatbush (1682) and later in New York (1726) this catechising took place on Monday.

While our information as to the Dutch American Sunday procedure is not full, still we may suppose some such program as the following: The master would on Sunday morning open the church, "place the stools and benches in the church or meeting house in order," put on the "psalm board" the psalms to be sung before the sermon, and ring the first bell. Then he would return to the schoolhouse (his home) where the children had in the meanwhile assembled, march with them to the church, and have the older ones sit about him to assist in the singing. The second bell would then be rung, after which he would "read a chapter out of the Holy Scriptures." "After the third ringing of the bell he shall read the ten commandments and the twelve articles of our faith, and then take the lead in the singing." It was the master's duty to secure proper behavior and attention during the church services.

¹ N. Y. Hist. Soc. Pub., 1892: 313.

² Dunabee, *op. cit.*, p. 30.

After the morning service there was an intermission for dinner. Then the pupils assembled in the schoolroom, where the older ones were questioned on the morning's sermon, and all on the catechism. This being done they marched to the church for afternoon service.¹

The punishments of the American Dutch school have had little mention in the written records. Only Curtius is known to have referred to the question, when he complained that some parents objected to having their boys whipped. We can not doubt, however, that *plak* and *roede* came over from Holland with the first master and did their share in rearing the sturdy Dutch youngsters.

The school books have a larger place in the records than have the *plak* and *roede*. We saw how the Lords Directors sent over school books for the schools of Pietersen and Curtius; and how these were to be charged to their accounts. We also saw that Pietersen when at South River bemoaned the lack of paper and pens, and slates and pencils. The use of slates here seems rather early, but there appears no particular reason to doubt the statement. In 1665 at Albany the inventory of Rutger Jacobsen's estate shows a "slate with a frame" valued at 10 florins and in the item next following "ditto without a frame" 4 florins.² The first certain instance that we have of the names of textbooks in Dutch America is found in the inventory of the estate of Dr. Gysbert van Imbrock, a physician at Wiltwyck (Kingston). Fifty separate titles are listed of which the following are specifically classified as "schoolbooks."

Quartos—

- 83 written and printed Histories of Tobias
- 8 Histories of David
- 3 Last Wills
- 7 Hours of Death
- 17 Exquisite Proofs of Man's Misery
- 3 General Epistles

Octavos—

- 100 Catechisms
- 23 Histories of David
- 102 A, B, C Books
- 27 Arts of Letters
- 19 Succinct Ideas (large)
- 9 Steps of Youth
- 13 Exquisite Proofs of Human Misery
- 8 Books of the Gospels and Epistles
- 48 Succinct Ideas, by Jacobus Boistius
- 1 Short Way, by Megapolensis

¹ Compare the third article of Van Ekalen's contract: "He shall instruct the children on every Wednesday and Saturday in the common prayers and in the questions and answers in the catechism, to enable them to repeat them better on Sunday before the afternoon service, or on Monday when they shall be catechised before the congregation. Upon all such occasions the schoolmaster shall be present and shall require the children to be friendly in their appearance and encourage them to answer truly and distinctly." Strong, *op cit.*, p. 111.

² Pearson, *Early Records of Albany*, p. 834. At the orphan house at Enkhuizen is a gable stone of date 1616 on which is carved a picture of a Dutch school. In this is a boy writing on something that looks much like a slate. One, however, can not feel certain. A photograph of the stone is seen in Muller's *Onze Goude Eeuw*, vol. 2, p. 368.

To these we may add two arithmetics that were not listed among the "schoolbooks", one by Jans Belot Hutteman and the other by Sybrand Hansen Cardinael (both octavos); and besides, Sebastiaen Frank's World Mirror (a quarto).¹

Why this physician at Wiltwyck should have so many schoolbooks may be explained by the fact that he was a shopkeeper in New Amsterdam at least from 1653 to 1655. In the latter year he received formal permission from the public authorities "to make a lottery of a certain number of Bibles, Testaments and other books."² Apparently these schoolbooks were some "dead stock" carried over from his shopkeeping. It is easy to conclude that these schoolbooks were those actually used in New Amsterdam in the fifties. Some of these are so distinctly religious as to suggest that they were to be used in connection with the work of the comforter of the sick rather than in the schoolroom.³ As such, one should select Hours of Death, Exquisite Proofs of Man's Misery, and possibly the Succinct Ideas. The Arts of Letters is a well-known A B C book. The Steps of Youth is evidently *De Trap der Jeugt* which we saw in the Utrecht list of 1650, but what kind of book it was we did not learn.⁴ The Short Way, by Megapolensis, is probably one of his catechisms, which we have previously discussed. The books of the Gospel and Epistles, the Histories of David and the Histories of Tobias are the reading books which we saw in use in Holland. The catechisms we recognize of course, as old friends. Of the first-named arithmetic the writer has learned nothing. The second is probably the "Het eerste school-boeck van Mr. Sybrand Hansz. Cardinael's *Arithmetica ofte Reecken-Konst.*"⁵ The Last Wills are almost certainly copies of a book by Lowys Porquin.⁶

Another list of schoolbooks, made up for the East Indies in 1649, may be considered almost certainly as being the same books that were used in New Netherland:

- 25 Bijbels in 4°
- 5 Bijbels in 8°
- 50 Psalm boecken in 4°
- 1,000 Catechismi
- 1,000 Historien van David en Tobias
- 500 Vraegboeckjens van Aldegonde⁷

¹ Old* Ulster, i: 368-370.

² Rec. of N. A., i, 288, 291, 294.

³ Compare Eccl. Rec., p. 507-508, N. Y. Col. Doc., xiii, 155, and Dunshee, *op. cit.*, p. 28.

⁴ See page 34.

⁵ This book was published at Amsterdam in four parts, each of which appeared in several editions. In Mr. G. A. Plimpton's mathematical library (New York) are several copies of the four parts bound, all dating, however, a little later than 1655.

⁶ Den utersten wille van Lowys Porquin. Doorhem by maniere van lieflyck Testament gestelt, tot onderwys ende stickenge van zyne kinderen * * * in dichte gestelt by Anthonis Verensis. Amst. by Herm. Jansz. Muller 1590. (The last will of Lowys Porquin. By him made after the manner of a pleasing testament for the instruction and edification of his children * * * done into verses by Anthonis Verensis.) Buddingh, *op. cit.*, p. 137.

⁷ Acta van particuliere Synoden van Zuid-Holland, iii, 266-267.

The history of Tobias has this full title: "The history of the elder Tobias and the younger Tobias, including many fine lessons; how a father shall instruct his son and how a God-fearing child will be obedient to his father. Also the history of the great cleverness of the noble widow Judith."¹ The "question book" of Aldegonde had as its full title: "Summary of the principal heads of the Christian religion, arranged in the form of question and answer for the benefit and profit of the tender raising of youth and for the edification of all Christians in general."² These same books, together with the *letter-consten* (spelling books) are included on another similar list with the accompanying statement that they were common in the schools of the Netherlands.³ Since the conditions under which the East India Company sent books to its colonies were so nearly the conditions that obtained at New Netherland, there is hardly room to doubt that these books "common in the schools of the Netherlands" were also used in the schools of the American Dutch.

Our next and almost only other reference to the actual Dutch-American schoolbooks is again gained from the inventory of an estate. This time of "Abraham de la Noy of New York, schoolmaster." As we saw, he was probably master of the school of the New York Reformed Dutch Church from 1686 to his death in 1702. From the inventory we select the following items, which seem undoubtedly to be textbooks used by him in his school.

6 books of Evangelists.....	£2-35
9 historical schoolbooks.....	3- 4
10 books of Cortimius.....	3- 9
14 catechism books.....	3- 6
32 song books.....	4- 6
13 books of Golden Trumpets.....	4 2- 6

The first item was a book of the four gospels used as a reading book, probably after the "groot A B C boeck." The historical school book may be "De Spiegel der Jeugt," treated of the Dutch wars. It may, however, be a book of biblical history. If it be "De Spiegel der Jeugt," we have in it one of the earliest instances in America of the separate teaching of modern history. Of the "Books of Cortimius" nothing has been found. The catechisms books were likely the simple Heidelberg catechisms, which were universal in the Dutch schools. The song books were probably metrical psalms, quite possibly St. Aldergonde's. The "Golden Trumpets" would seem to be a song book. With one book totally unknown, the rest with one possible exception are distinctly religious.

¹ Acta van particuliere Synoden van Zuid-Holland, iii, p. 214 (editorial footnote). The book was published at Amsterdam in 1617.

² Delft, 1599. *Ibid.*, p. 214. The author Marnix van St. Aldegonde was a prominent Calvinist, a soldier and *littérateur*, author of a version of the psalms and one of the founders of modern Netherland prose. Blok, *History of the Dutch people*, iii, 195.

³ Acta van part. synod. van Zuid-Holland, iii, 374.

⁴ N. Y. Hist. Soc. Pub., 1892: 313.

Leaving these religious books we come next to a book, not only not religious, but one actually written by "a crafty freethinker from Groningen,"¹ the arithmetic of Pieter Venema, a master of mathematics and writing, here in New York.² So far as the writer has found, this is the only textbook in the Dutch language published in America. It seems to be the third arithmetic published in America. Such a book would find no place probably in the elementary Dutch schools, but would be taught in those private schools, principally commercial in character, which were common in New York from before the beginning of the eighteenth century.³

Putting together the school procedure known to have been followed in America and the probable Holland custom, we may in résumé make an ideal reproduction of the school life of the Holland-American village children.

The child, whether boy or girl, began school at about 7 years of age. The school was kept in the largest room of the schoolmaster's home, which was near the church. The session opened at 8 o'clock in the morning and closed at 4 in the afternoon, with an intermission from 11 to 2 for dinner. A bell or a horn or a drum might be used to summon the pupils. Six days in the week the year round did the children go to school. The holidays were Wednesday and Saturday afternoons,⁴ and St. Nicholas Day (December 6), Christmas, New Year, Easter, and Pinkster (whitsuntide), with possibly others.

The schoolroom had as furniture only the master's desk, and chairs, and backless benches for the children, with tables for writing. The boys and girls sat in separate parts of the room, the girls furthest from the master. The little boys, especially if they were timid, might sit with the girls. Each child must be taught his lesson once and must recite twice in the forenoon and the same in the afternoon. The boys, as soon as they entered the room in the morning, must raise their caps to the master and must remove them when they recited; at other times the cap was kept on the head. The first thing on the opening of school was the morning prayer, led by the older pupils in turn. All joined in this if the master so directed. Similar prayers opened and closed each half day's session.

The first book studied was an alphabet book, on the title page of which was a large cock. In this the child found the alphabet repeated

¹ Eccl. Rec., p. 2756.

² *Arithmetica | of | Cyffer-Konst, | Volgens de Munten Maten en | Gewigten, te Nieu-York, | gebruykelyk | Als Mede | Een kort ontwerp van de | Algebra, | Opgesteld door | Pieter Venema, | Mr. in de Mathesis en Schryf-konst. | Nieu-York | Gedrukt voor Jacob Geolet, by de | Oude-Slip, by J. Peter Zenger, | MDCCXXX.*

Arithmetic or the art of ciphering, according to the coins, measures, and weights used at New York, together with a short treatise on algebra drawn up by Pieter Venema, master in mathematics and the art of writing. New York, printed for Jacob Goelet, near the Old Slip, by J. Peter Zenger, 1730.

³ Chaplain Sharpe writes in 1713 of New York: "The City is so conveniently Situated for Trade and the Genius of the people is Inclined to merchandise, that they generally seek no other Education for their children than writing and arithmetic." N. Y. Hist. Soc. Pub., 1880: 341.

⁴ The Holland schools still have these weekly half holidays.

in different sizes and types, the vowels, syllables such as ab, eb, ib, ob, ub, the Ten Commandments, the general Christian creed, the Lord's prayer, the church formularies for "holy baptism," "holy communion," and "Christian punishments," together with the morning and evening prayers and the prayers before and after dinner, the prayer of Solomon, and (later) the Dutch counting table. Next was a reading book consisting of the evangelists and possibly other selections from the New Testament; after this would come Old Testament history selections, perhaps the history of David. At the close of each half day session, just before the prayer, a psalm was sung, and for this some book of metrical psalms was necessary.

All of the boys and most of the girls entered the writing class; but as the girls by this time were needed at home, many would stop before they learned even to write their names. Probably all the pupils learned to count and to recognize and, possibly, to make the figures; and the ambitious boys learned privately to reckon. Each day there was a lesson with the catechism, but Wednesday and Saturday mornings were especially devoted to this. On Saturday morning the last hour was given up to learning the psalms for the next day's church service. On Monday, or perhaps Wednesday, all the children went to the church and there were catechized publicly before the ministers and elders and such of their parents as cared to come. This was the most important occasion of the whole week. If any child missed his lessons or had broken—whether in school or out—any of the long list of rules posted in the schoolhouse he must be punished either on the hand with the *plak*, or if especially bad, with the dreaded *roede*. And somehow punishments were frequent. If the boy had not by 12 years of age learned as much as seemed necessary, he was sent to evening school. Each quarter the father paid the master the regular tuition or the child could not continue in school.

All in all, it was a simple life, hearty enough, and earnest enough. There were no rich people and no poor ones, and few servants. In school the children learned to read and possibly to write, but especially how to take part intelligently in the church service. When contrasted with the school life of twentieth-century America, the picture here given seems simple, indeed. But in the very simplicity is an earnestness which commends this school of the irrevocable past. Life is now more complex, and preparation for it more difficult. Perhaps the school of Holland-America, standing between the home and the church and close to both, fitted the children of that day for their life quite as adequately as does its more pretentious successor in these days of more difficult adjustment.

CHAPTER XV.

CONCLUSION.

The Dutch control of New Netherland lasted for only about 40 years; but the original stock held tenaciously to its language and customs long after the English took possession. The educational institution of the Dutch village during the whole period, even down to the American Revolution, was the parochial school, which had been fashioned in Holland to meet both secular and religious needs. During the Dutch régime, the West India Company supplied salaries for the New Amsterdam schools—both parochial and Latin—and assisted some of the villages in supporting their schoolmasters. In no true sense, however, was there a central colonial system in the management of school affairs. Control was in the hands of the local magistracy and consistory, except that in New Amsterdam a third factor was the director general. As in Holland, so in New Netherland, tuition charges were universal, save for "the poor and needy." The expression "free school" was nowhere found among the American Dutch.¹ Girls attended the school on the same footing as boys, but sat apart and recited in different classes. Evening schools seem to have been the rule throughout Dutch America. Dame schools were very seldom found. The curriculum of the elementary school was exactly transferred from Holland. The parish school taught always two of the three R's but offered the third only where commerce made reckoning necessary. A little modern history was taught in Holland and possibly at places in America. The religious part of the curriculum was much stressed.

The elementary school of New Amsterdam was continued as the city school of New York until the second English occupation (1674), since which time it has been maintained as the school of the Reformed Dutch Church of New York City. Its practically continuous operation since 1638 gives it possibly the priority in America as an elementary foundation. The schools in the Dutch villages were continued as the public schools of those villages until the Revolution, and probably longer.

The showing of the American Dutch in the matter of illiteracy is better than that found in some other colonies. At Albany of 360 men's names examined, covering the years from 1654 to 1675, 21 per cent made their marks. Of 274 men's signatures at Flatbush, covering a longer period, 19 per cent made their marks. Corresponding

¹ Except at Bergen in 1668 (see p. 205); where, however, the term is quite likely of English origin.

figures for other American colonies are available in only a few instances. Of the German male immigrants above 16 years of age who came to Pennsylvania in the first half of the eighteenth century, 11,823 names have been counted, with the result of 26 per cent who made their marks.¹ Bruce found, by a most painstaking count of the seventeenth-century Virginians, that of 2,165 male adults who signed jury lists, 46 per cent made their marks; and of 12,445 male adults who signed deeds and depositions, 40 per cent made their marks.² In comparison with these last figures, both Dutch and German made a much better showing. A further significant result appeared from our study of illiteracy, namely, that the male Dutch inhabitants of Flatbush made continuous improvement in this respect, the percentage of illiteracy decreasing gradually from 40 per cent in 1675 to about 6 per cent in 1738.

In the case of the Dutch women fewer names were collected, and the showing was not so good. At Flatbush the names of only 55 persons were secured, of whom 32, or 56 per cent, made marks. Thirty-three Albany women gave 55 per cent illiteracy. The nearly identical results in the two cases would be quite significant had we not a third list of 46 Dutch women made up from other portions of the colony, which shows an illiteracy of 66 per cent. Putting all the Dutch women together we get, for the figures available, 154, a percentage of illiteracy of 60 per cent. Bruce found in Virginia, out of 3,066 women signing deeds and depositions an illiteracy of 75 per cent.³ If we can accept conclusions from the small numbers, the Dutch on the whole make a better showing, the superiority being greater with the men than the women.

By way of comparison with these results a study was made of the signatures to deeds, etc., executed in Suffolk County (Boston), Mass., for two periods in the seventeenth century a generation apart. Two volumes of the published deeds were used;⁴ the first covering the period 1653-1656, the other, 1681-1697. The results are as follows:

Suffolk County (Mass.) illiteracy, 1653-1697.

	1653-1656	1686-1697
Number of men's names.....	179	199
Number of men's marks.....	20	22
Per cent of men making marks.....	11	11
Number of women's names.....	48	130
Number of women's marks.....	28	49
Per cent of women making marks.....	58	38

¹ The count was made by the writer in an unpublished study of I. D. Rupp's "A collection of * * * 30,000 names of German * * * and other immigrants in Pennsylvania, 1727 to 1776" (2d ed. Philadelphia, 1898). The year 1750 divides nearly equally the immigration. Of 11,201, who came in the years 1751 to 1774 (inclusive), 1,638 made marks, which gives the much better showing for the later period of 15 per cent illiteracy. The whole number of Germans counted was 23,024, of whom 4,735, or 21 per cent, made marks.

² Bruce, *Institutional History of Virginia in the 17th Century*, I, 452 ff. (New York, 1910).

³ *Ibid.*, p. 457.

⁴ *Suffolk Deeds*, libers II and XIV. Boston (1883 and 1906).

The showing here made for this Massachusetts county presents some interesting contrasts with the results of the Flatbush study. In the latter there was marked improvement from 1653 to 1697; in the former there was improvement only in the case of the women. At the early period the Massachusetts men made a much better showing than the Flatbush men, while the women are nearly the same. For the later period the men of the two regions are about the same, while the Massachusetts women have advanced. Of course these figures are too small to admit of final comparison with Bruce's figures for Virginia; and for two reasons, moreover, are not precisely to be compared with those from Flatbush. Signatures taken from deeds give a selection in favor of the property class, and consequently should show less illiteracy; and the presence of Boston within the county of Suffolk would give a somewhat different grouping of men from that which was found in the small farming village of Flatbush.

That the Dutch schools of America are properly called public seems unquestionable. They were open to all the children, were controlled by the duly constituted civil authorities, and were both housed and supported by the public moneys. It is true that direct tax levies for school support were not (as a rule) made, that tuition was regularly charged, and that the church had more or less voice in the management. There was, therefore, a failure in these results to reach the present conception of the American public schools; but neither one nor all of the defects can destroy their essential character as public schools.

The question as to the influence of these schools on the development of the American public education would for a satisfactory answer carry us far beyond the scope of this work. Rather has this study been planned to supply information regarding the Dutch in America that can be used by others in the investigation of such questions. The attitude of the English in colonial New York was not of a nature to utilize the Dutch interest in education, nor did the Dutch seem disposed to seek a basis of helpful cooperation. Public education in New York City accordingly did not flourish during the century of English control. But with the Dutch villages the case was far otherwise. Apparently in each was maintained a genuine public school. It seems, therefore, unthinkable that this deep interest in public education, which for over a century was extended through so much of the colony, should have had no part in early committing New York to a strong policy of State public schools.

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